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LOGINID:sssptal626gms

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 SEP 09 CA/CAPLUS records now contain indexing from 1907 to the
present
NEWS 4 DEC 08 INPADOC: Legal Status data reloaded
NEWS 5 SEP 29 DISSABS now available on STN
NEWS 6 OCT 10 PCTFULL: Two new display fields added
NEWS 7 OCT 21 BIOSIS file reloaded and enhanced
NEWS 8 OCT 28 BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS 9 NOV 24 MSDS-CCOHS file reloaded
NEWS 10 DEC 08 CABA reloaded with left truncation
NEWS 11 DEC 08 IMS file names changed
NEWS 12 DEC 09 Experimental property data collected by CAS now available
in REGISTRY
NEWS 13 DEC 09 STN Entry Date available for display in REGISTRY and CA/CAPLUS
NEWS 14 DEC 17 DGENE: Two new display fields added
NEWS 15 DEC 18 BIOTECHNO no longer updated
NEWS 16 DEC 19 CROPU no longer updated; subscriber discount no longer
available
NEWS 17 DEC 22 Additional INPI reactions and pre-1907 documents added to CAS
databases
NEWS 18 DEC 22 IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS 19 DEC 22 ABI-INFORM now available on STN
NEWS 20 JAN 27 Source of Registration (SR) information in REGISTRY updated
and searchable
NEWS 21 JAN 27 A new search aid, the Company Name Thesaurus, available in
CA/CAPLUS
NEWS 22 FEB 05 German (DE) application and patent publication number format
changes
NEWS 23 MAR 03 MEDLINE and LMEDLINE reloaded
NEWS 24 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 25 MAR 03 FRANCEPAT now available on STN

NEWS EXPRESS MARCH 5 CURRENT WINDOWS VERSION IS V7.00A, CURRENT
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
AND CURRENT DISCOVER FILE IS DATED 3 MARCH 2004
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 10:30:38 ON 22 MAR 2004

=>

Uploading

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Do you want to switch to the Registry File?

Choice (Y/n):

Switching to the Registry File...

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> FILE REGISTRY

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 0.21 | 0.21 |

FILE 'REGISTRY' ENTERED AT 10:30:55 ON 22 MAR 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 19 MAR 2004 HIGHEST RN 665776-10-3

DICTIONARY FILE UPDATES: 19 MAR 2004 HIGHEST RN 665776-10-3

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

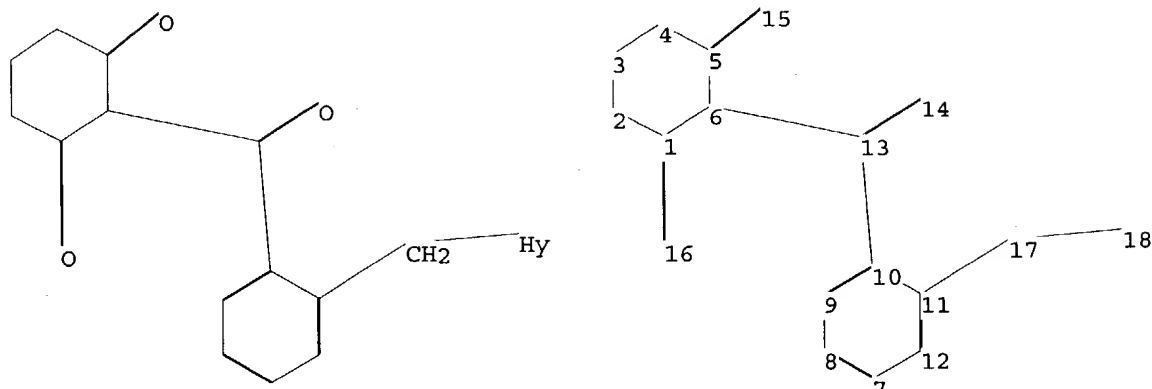
Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\09743876.str



chain nodes :

13 14 15 16 17 18

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12

chain bonds :

1-16 5-15 6-13 10-13 11-17 13-14 17-18

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12

exact/norm bonds :

1-16 5-15 13-14 17-18

exact bonds :

1-2 1-6 2-3 3-4 4-5 5-6 6-13 10-13 11-17

normalized bonds :

7-8 7-12 8-9 9-10 10-11 11-12

isolated ring systems :

containing 1 : 7 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom

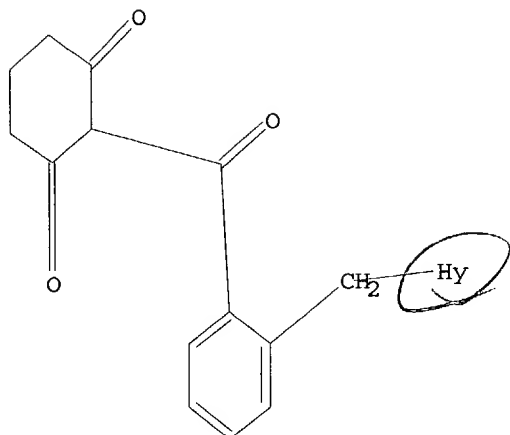
11:Atom 12:Atom 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:Atom

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 10:31:11 FILE 'REGISTRY'

SEARCH INTERRUPTED

L2 QUERY CREATED

If this message appears repeatedly, please notify the Help Desk.
Enter "HELP STN" for information on contacting the nearest STN Help Desk by telephone or via SEND in the STNMAIL file.

=> s l1
SAMPLE SEARCH INITIATED 10:31:31 FILE 'REGISTRY'

SEARCH INTERRUPTED

L3 QUERY CREATED

If this message appears repeatedly, please notify the Help Desk.
Enter "HELP STN" for information on contacting the nearest STN Help Desk by telephone or via SEND in the STNMAIL file.

=> s l1
SAMPLE SEARCH INITIATED 10:32:14 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 249 TO ITERATE

100.0% PROCESSED 249 ITERATIONS
SEARCH TIME: 00.00.05

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 4034 TO 5926
PROJECTED ANSWERS: 7 TO 298

L4 7 SEA SSS SAM L1

=> s l1 sss full
FULL SEARCH INITIATED 10:32:33 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 4961 TO ITERATE

09743876

7 ANSWERS

100.0% PROCESSED 4961 ITERATIONS
SEARCH TIME: 00.00.01

82 ANSWERS

L5 82 SEA SSS FUL L1

=> FIL CAPLUS

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

156.26

156.47

FILE 'CAPLUS' ENTERED AT 10:32:38 ON 22 MAR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 22 Mar 2004 VOL 140 ISS 13
FILE LAST UPDATED: 21 Mar 2004 (20040321/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 15

L6

5 L5

=> d 16 ibib abs hitstr tot

L6 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:609552 CAPLUS

DOCUMENT NUMBER: 137:136361

TITLE: Selective herbicidal compositions comprising
arylketones and safenersINVENTOR(S): Feucht, Dieter; Dahmen, Peter; Drewes, Mark-Wilhelm;
Pontzen, Rolf; Mueller, Klaus-Helmut; Lehr, Stefan;
Schwarz, Hans-Georg; Goto, Toshio; Shirakura, Shinichi

PATENT ASSIGNEE(S): Bayer Ag, Germany; Nihon Bayer Agrochem K.K.

SOURCE: Ger. Offen., 52 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|------------------|----------|
| DE 10106420 | A1 | 20020814 | DE 2001-10106420 | 20010212 |
| WO 2002063957 | A2 | 20020822 | WO 2002-EP911 | 20020130 |
| WO 2002063957 | A3 | 20021219 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1367888 A2 20031210 EP 2002-702325 20020130

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

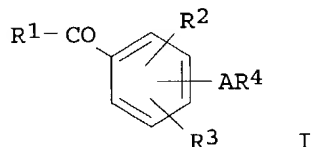
PRIORITY APPLN. INFO.:

DE 2001-10106420 A 20010212

WO 2002-EP911 W 20020130

OTHER SOURCE(S): MARPAT 137:136361

GI



AB The title compns. contain substituted arylketones I (A = alkanediyl; R1 = substituted cyclohexene, imidazolyl, oxazolyl etc.; R2, R3 = H, nitro, cyano, carboxy, carbamoyl, etc.; R4 = mono-, di- or heterocycyl, etc.), any of a large number of known safeners (MON-4660, dicyclonon, benoxacor, cloquintocet-mexyl, cumyluron, cyometrinil, furilazole, etc.) and optionally other active ingredients.

IT 444899-93-8 444899-94-9 444899-95-0

444899-96-1

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(selective safened herbicidal composition)

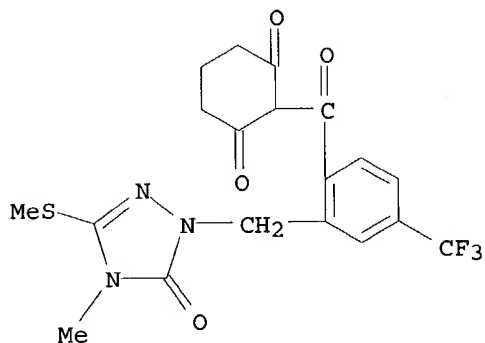
RN 444899-93-8 CAPLUS

CN 1H-Pyrazole-3,5-dicarboxylic acid, 1-(2,4-dichlorophenyl)-4,5-dihydro-5-methyl-, diethyl ester, mixt. with 2-[2-[[4,5-dihydro-4-methyl-3-(methylthio)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]-1,3-cyclohexanedione (9CI) (CA INDEX NAME)

CM 1

CRN 256230-72-5

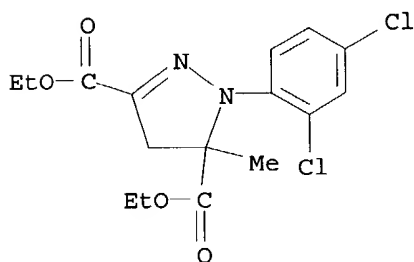
CMF C19 H18 F3 N3 O4 S



CM 2

CRN 135590-91-9

CMF C16 H18 Cl2 N2 O4



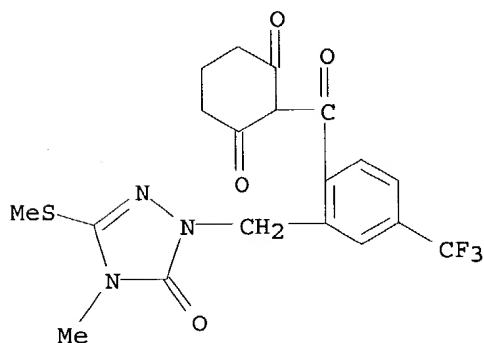
RN 444899-94-9 CAPLUS

CN 1H-1,2,4-Triazole-3-carboxylic acid, 1-(2,4-dichlorophenyl)-5-(trichloromethyl)-, ethyl ester, mixt. with 2-[2-[[4,5-dihydro-4-methyl-3-(methylthio)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]-1,3-cyclohexanedione (9CI) (CA INDEX NAME)

CM 1

CRN 256230-72-5

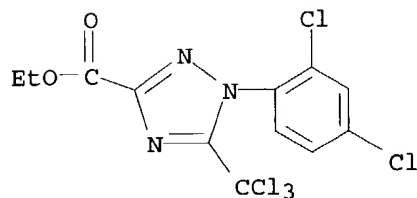
CMF C19 H18 F3 N3 O4 S



CM 2

CRN 103112-35-2

CMF C12 H8 Cl5 N3 O2



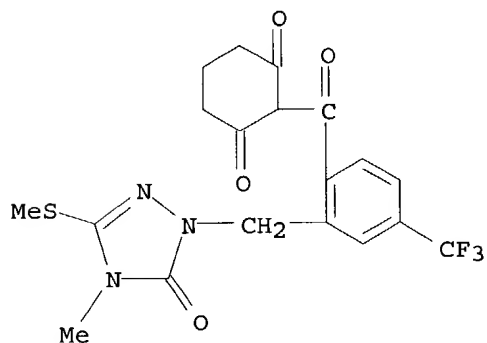
RN 444899-95-0 CAPLUS

CN Acetic acid, [(5-chloro-8-quinolinyl)oxy]-, 1-methylhexyl ester, mixt.
with 2-[2-[[4,5-dihydro-4-methyl-3-(methylthio)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]-1,3-cyclohexanedione (9CI) (CA
INDEX NAME)

CM 1

CRN 256230-72-5

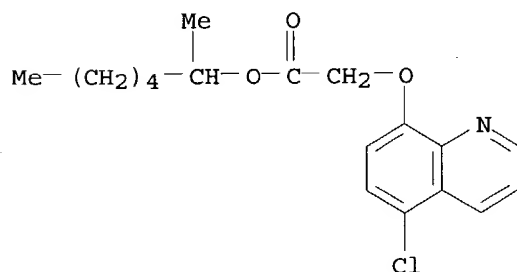
CMF C19 H18 F3 N3 O4 S



CM 2

CRN 99607-70-2

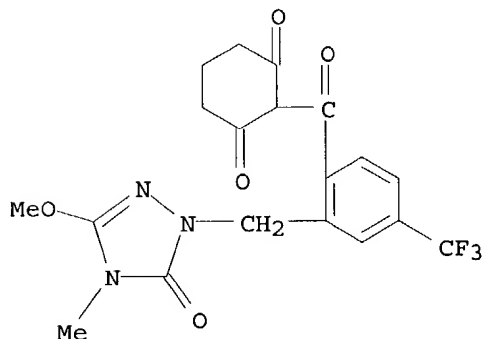
CMF C18 H22 Cl N O3



RN 444899-96-1 CAPLUS
CN 1,3-Cyclohexanedione, 2-[2-[(4,5-dihydro-3-methoxy-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]-, mixt. with 3-(dichloroacetyl)-5-(2-furanyl)-2,2-dimethyloxazolidine (9CI) (CA INDEX NAME)

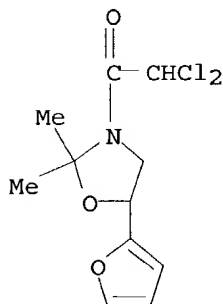
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CRN 256230-78-1
CMF C19 H18 F3 N3 O5



CM 2

CRN 121776-33-8
CMF C11 H13 Cl2 N O3



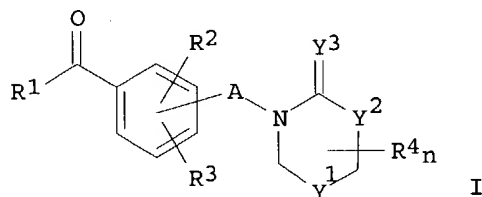
L6 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:107336 CAPLUS
DOCUMENT NUMBER: 136:151159
TITLE: Preparation of heteroarylidene cyanamides as herbicides
INVENTOR(S): Mueller, Klaus-Helmut; Herrmann, Stefan; Hoischen, Dorothee; Lehr, Stefan; Schwarz, Hans-Georg; Schallner, Otto; Drewes, Mark Wilhelm; Dahmen, Peter; Feucht, Dieter; Pontzen, Rolf
PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|--------------------|----------|
| WO 2002010155 | A1 | 20020207 | WO 2001-EP8225 | 20010717 |
| W: AE, AG, AL, AM, <u>SAT</u> , AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| DE 10037149 | A1 | 20020207 | DE 2000-10037149 | 20000729 |
| BR 2001012844 | A | 20030422 | BR 2001-12844 | 20010717 |
| EP 1322639 | A1 | 20030702 | EP 2001-960504 | 20010717 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| JP 2004505076 | T2 | 20040219 | JP 2002-515885 | 20010717 |
| PRIORITY APPLN. INFO.: | | | DE 2000-10037149 A | 20000729 |
| | | | WO 2001-EP8225 W | 20010717 |
| OTHER SOURCE(S): | | | MARPAT 136:151159 | |
| GI | | | | |



AB Title compds. [I; n = 0-4; A = alkylene; R1 = (substituted) 1-oxocyclohex-2-en-2-yl, 1H-pyrazol-4-yl, 4-isoxazolyl, alkylcarbonyl; R2, R3 = H, NO2, cyano, CO2H, carbamoyl, thiocarbamoyl, halo, (substituted) alkyl, alkoxy, etc.; R4 = (substituted) alkyl; Y1 = bond, O, S, NZ, (substituted) alkylene; Y2 = S, NZ; Y3 = NY4, NY4Y5, O; Y4 = H, cyano, NO2, (substituted) alkylcarbonyl, alkylsulfonyl, arylcarbonyl, arylsulfonyl; Y5 = cyano, NO2, (substituted) alkylcarbonyl, alkylsulfonyl, arylcarbonyl, arylsulfonyl; Z = H, (substituted) alkyl, alkenyl, alkynyl], were prepared. Thus, a mixture of 2-[(2-cyanoimino-1,3-thiazol-3-yl)methyl]-4-trifluoromethylbenzoic acid (preparation given), 1,3-cyclohexanedione, and dicyclohexylcarbodiimide (DCC) in MeCN was stirred for 20 h at room temperature followed by addition of Et3N and Me3SiCN and stirring for 2 h at room temperature to give 3-[2-[(2,6-dioxocyclohexyl)carbonyl]-5-trifluoromethylbenzyl]-1,3-thiazol-2-ylidene cyanamide. I were said to show very strong pre- and postemergent herbicidal activity and good crop tolerance.

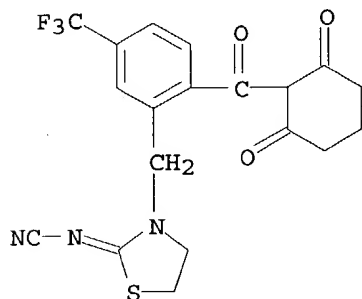
IT 395069-22-4P

RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of heteroarylidene cyanamides as herbicides)

RN 395069-22-4 CAPLUS

CN Cyanamide, [3-[[2-[(2,6-dioxocyclohexyl)carbonyl]-5-(trifluoromethyl)phenyl]methyl]-2-thiazolidinylidene]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:488529 CAPLUS

DOCUMENT NUMBER: 135:76873

TITLE: Preparation of oxoazolidinylalkylbenzoylcyclohexanediones and related compounds as herbicides.

INVENTOR(S): Mueller, Klaus-helmut; Schwarz, Hans-georg; Lehr, Stefan; Schallner, Otto; Hoischen, Dorothee; Drewes, Mark-wilhelm; Dahmen, Peter; Feucht, Dieter; Pontzen, Rolf

PATENT ASSIGNEE(S): Bayer A.-G., Germany

SOURCE: Ger. Offen., 34 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

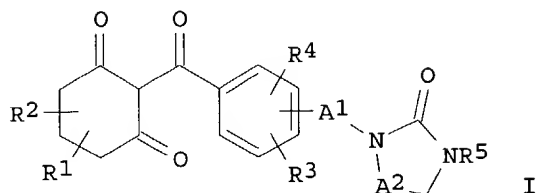
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|--------------------|----------|
| DE 19962923 | A1 | 20010705 | DE 1999-19962923 | 19991224 |
| WO 2001047894 | A1 | 20010705 | WO 2000-EP12583 | 20001212 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1244634 | A1 | 20021002 | EP 2000-991172 | 20001212 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| BR 2000017044 | A | 20030107 | BR 2000-17044 | 20001212 |
| JP 2003527351 | T2 | 20030916 | JP 2001-549366 | 20001212 |
| US 2003119674 | A1 | 20030626 | US 2002-168420 | 20020621 |
| PRIORITY APPLN. INFO.: | | | DE 1999-19962923 A | 19991224 |

WO 2000-EP12583 W 20001212

OTHER SOURCE(S) :

MARPAT 135:76873

GI



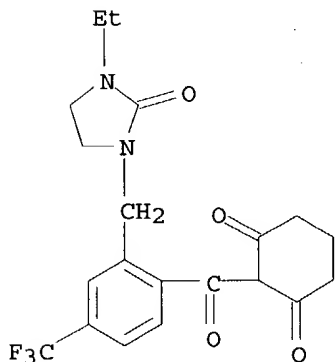
AB Title compds. [I; A1 = bond, alkylene; A2 = alkylene; R1 = H, Ph, (halo-substituted) alkyl, alkylthio, alkoxy, carbonyl; R2 = H, (halo-substituted) alkyl, alkylthio; R1R2C = CO; R3 = H, NO2, cyano, CO2H, carbamoyl, thiocarbamoyl, halo, (halo-substituted) alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, etc.; R4 = H, NO2, cyano, CO2H, carbamoyl, thiocarbamoyl, halo, (halo-substituted) alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, etc.; R5 = H, amino, (substituted) alkyl, alkoxy, alkylamino, dialkylamino, alkylsulfonyl, alkylsulfonylamino, alkenyl, alkynyl, etc.], were prepared as herbicides (no data). Thus, 2,4-dichloro-3-[(3-methyl-2-oxoimidazolidin-1-yl)methyl]benzoic acid (preparation given) in MeCN was treated with 1,3-cyclohexanedione and DCC followed by stirring for 30 min., addition of Et3N and acetone cyanohydrin, and stirring for 15 h to give 42% 2-[2,4-dichloro-3-[(3-methyl-2-oxoimidazolidin-1-yl)methyl]benzoyl]-1,3-cyclohexanedione. Numerous I were said to show strong herbicidal activity.

IT 347852-38-4P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of oxoazolidinylalkylbenzoylcyclohexanediones and related compds. as herbicides)

RN 347852-38-4 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3-ethyl-2-oxo-1-imidazolidinyl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



L6 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:115133 CAPLUS

DOCUMENT NUMBER: 134:163041

TITLE: Preparation of herbicidal tetrazolinones

INVENTOR(S): Yanagi, Akihiko; Narabu, Shinichi; Goto, Toshio; Ito, Seishi; Ueno, Chieko

PATENT ASSIGNEE(S): Nihon Bayer Agrochem K.K., Japan

SOURCE: PCT Int. Appl., 115 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

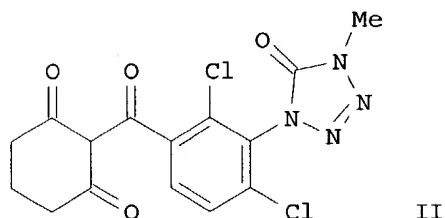
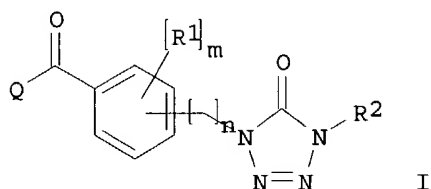
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2001010850 | A1 | 20010215 | WO 2000-IB1064 | 20000728 |
| W: AE, AG, AL, AM, AT , AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| BR 2000013075 | A | 20020521 | BR 2000-13075 | 20000728 |
| EP 1208090 | A1 | 20020529 | EP 2000-944182 | 20000728 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| JP 2003506443 | T2 | 20030218 | JP 2001-515316 | 20000728 |
| JP 2001114769 | A2 | 20010424 | JP 2000-231450 | 20000731 |
| <u>US 6624121</u> | B1 | 20030923 | US 2002-49405 | 20020205 |
| PRIORITY APPLN. INFO.: | | | JP 1999-226845 | A 19990810 |
| | | | WO 2000-IB1064 | W 20000728 |

OTHER SOURCE(S): MARPAT 134:163041

GI



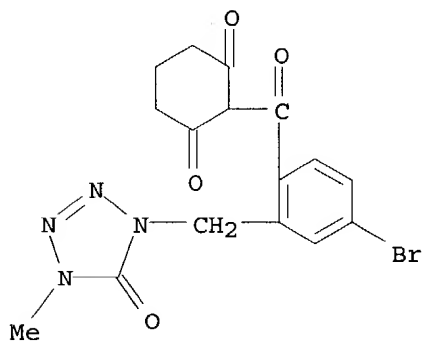
AB The title compds. [I; R1 = halo, alkyl, haloalkyl, etc.; R2 = H, alkyl, (un)substituted cycloalkyl, etc.; m = 0-2; n = 0-1; Q = (un)substituted 1,3-dioxo-2-cyclohexanyl, 5-hydroxy-4-pyrazolyl, 4-isoxazolyl, etc.], useful as herbicides, were prepared. Thus, treatment of 2,4-dichloro-3-(4,5-dihydro-4-methyl-5-oxo-1H-tetrazol-1-yl)benzoic acid with SOCl₂ followed by reaction of the resulting acid chloride with 1,3-cyclohexanedione afforded 51% II which showed more than 90% of herbicidal activity against barnyardgrass, foxtail, common amaranth and knotweed at 2.0 kg/ha.

IT 325459-95-8P 325459-97-0P 325459-98-1P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of herbicidal tetrazolinones)

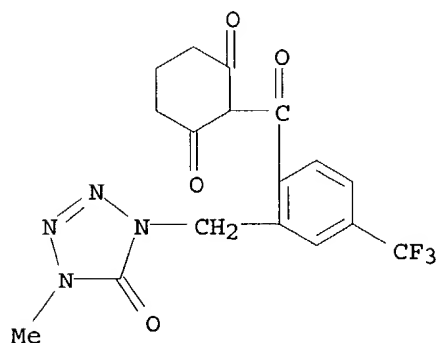
RN 325459-95-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[(4,5-dihydro-4-methyl-5-oxo-1H-tetrazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)

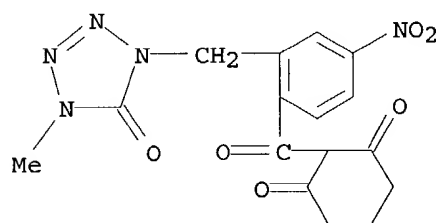


RN 325459-97-0 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4,5-dihydro-4-methyl-5-oxo-1H-tetrazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



RN 325459-98-1 CAPLUS
 CN 1,3-Cyclohexanedione, 2-[2-[(4,5-dihydro-4-methyl-5-oxo-1H-tetrazol-1-yl)methyl]-4-nitrobenzoyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:65543 CAPLUS

DOCUMENT NUMBER: 132:122623

TITLE: Preparation of 2-(oxotriazolylbenzoyl)-1,3-cyclohexanediones and related compounds as herbicides.

INVENTOR(S): Schwarz, Hans-Georg; Mueller, Klaus-Helmut; Lehr, Stefan; Schallner, Otto; Wroblowsky, Heinz-Juergen; Drewes, Mark Wilhelm; Feucht, Dieter; Pontzen, Rolf; Wetcholowsky, Ingo

PATENT ASSIGNEE(S): Bayer A.-G., Germany

SOURCE: Ger. Offen., 114 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|------------------|----------|
| DE 19921732 | A1 | 20000127 | DE 1999-19921732 | 19990511 |
| CA 2338304 | AA | 20000203 | CA 1999-2338304 | 19990713 |
| WO 2000005221 | A1 | 20000203 | WO 1999-EP4929 | 19990713 |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

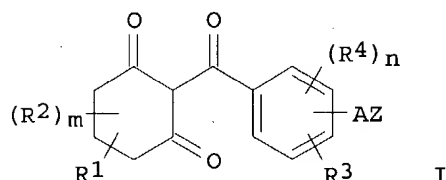
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| AU 9955050 | A1 | 20000214 | AU 1999-55050 | 19990713 |
| AU 749204 | B2 | 20020620 | | |
| BR 9912392 | A | 20010508 | BR 1999-12392 | 19990713 |
| EP 1100789 | A1 | 20010523 | EP 1999-941423 | 19990713 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

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|---------------|----|----------|----------------|----------|
| JP 2002521373 | T2 | 20020716 | JP 2000-561177 | 19990713 |
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PRIORITY APPLN. INFO.: DE 1998-19833360 A1 19980724
DE 1999-19921732 A 19990511
WO 1999-EP4929 W 19990713

OTHER SOURCE(S): MARPAT 132:122623
GI



AB Title compds. [I; m, n = 0-3; A = bond, alkylene; R1 = H, (substituted) alkyl, alkoxy, carbonyl; R2 = (substituted) alkyl; R1R2 = alkylene; R3 = H, NO2, cyano, CO2H, carbamoyl, thiocarbamoyl, halo, (substituted) alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, dialkylamino, dialkylaminosulfonyl; R4 = NO2, cyano, CO2H, carbamoyl, thiocarbamoyl, halo, (substituted) alkyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, dialkylamino, dialkylaminosulfonyl; Z = (substituted) 4-12 membered mono- or bicyclic heterocyclyl], were prepared. Thus, 5-ethoxy-4-methyl-2-(2-carboxy-5-trifluoromethylbenzyl)-2,4-dihydro-3H-1,2,4-triazol-3-one, 1,3-cyclohexanedione, and DCC were stirred overnight in MeCN; Et3N and Me3SiCN were added to give after 3 h 52% 5-ethoxy-4-methyl-[2-(2,6-dioxocyclohexylcarbonyl)-5-trifluoromethylbenzyl]2,4-dihydro-3H-1,2,4-triazol-3-one. The latter was said to show strong herbicidal activity combined with good crop tolerance.

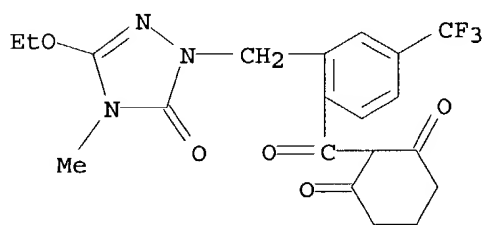
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 256231-55-7P 256231-56-8P 256231-57-9P
 256231-58-0P 256231-59-1P 256412-83-6P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of 2-(oxotriazolylbenzoyl)-1,3-cyclohexanediones and related compds. as herbicides)

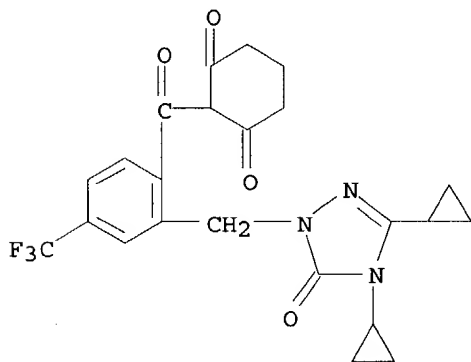
RN 256230-50-9 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3-ethoxy-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



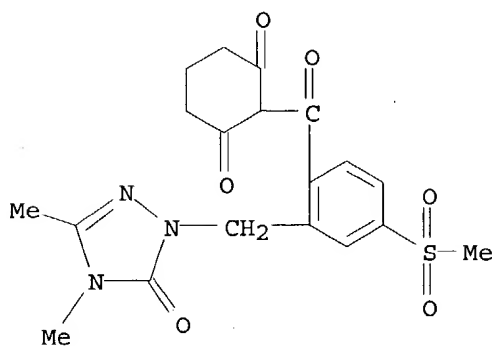
RN 256230-53-2 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3,4-dicyclopropyl-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



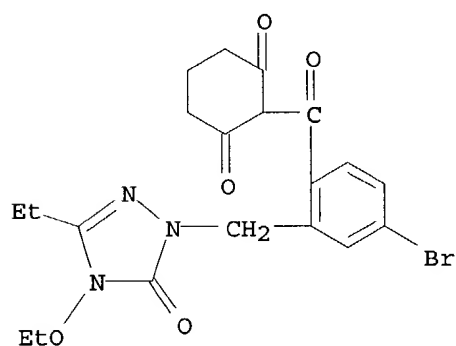
RN 256230-55-4 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4,5-dihydro-3,4-dimethyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



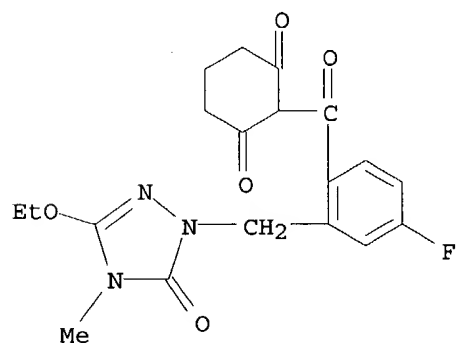
RN 256230-59-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[(4-ethoxy-3-ethyl-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



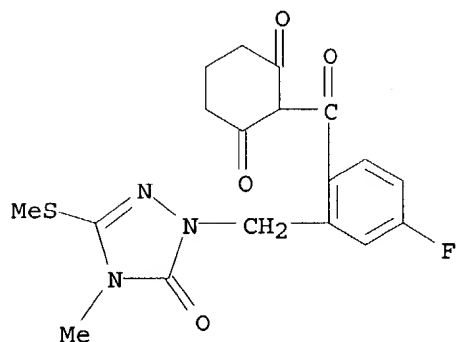
RN 256230-60-1 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3-ethoxy-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-fluorobenzoyl]- (9CI) (CA INDEX NAME)



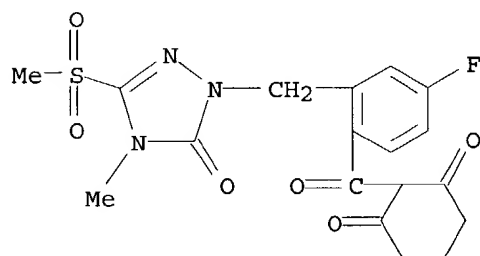
RN 256230-61-2 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-3-(methylthio)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-fluorobenzoyl]- (9CI) (CA INDEX NAME)



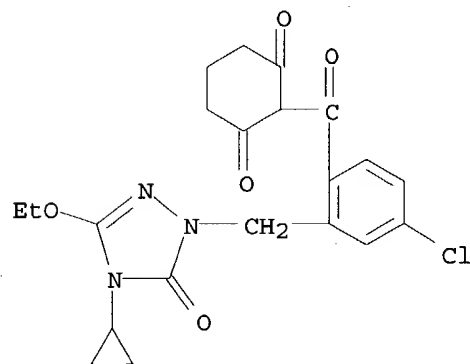
RN 256230-62-3 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-3-(methylsulfonyl)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-fluorobenzoyl]- (9CI) (CA INDEX NAME)



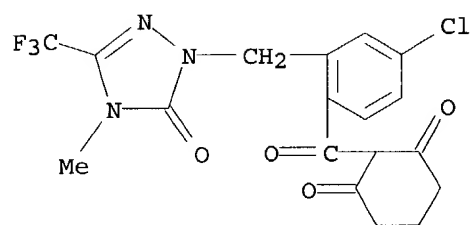
RN 256230-66-7 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-chloro-2-[(4-cyclopropyl-3-ethoxy-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



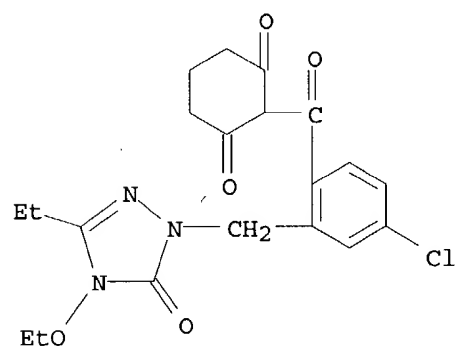
RN 256230-67-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-chloro-2-[[4,5-dihydro-4-methyl-5-oxo-3-(trifluoromethyl)-1H-1,2,4-triazol-1-yl]methyl]benzoyl]- (9CI) (CA INDEX NAME)



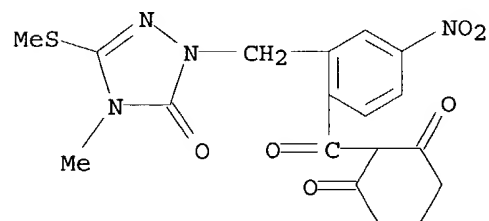
RN 256230-68-9 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-chloro-2-[(4-ethoxy-3-ethyl-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



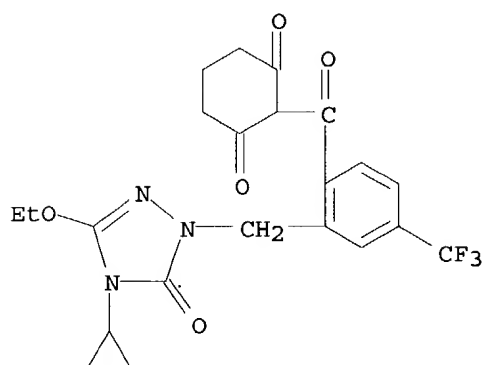
RN 256230-69-0 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-3-(methylthio)-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-nitrobenzoyl]- (9CI) (CA INDEX NAME)



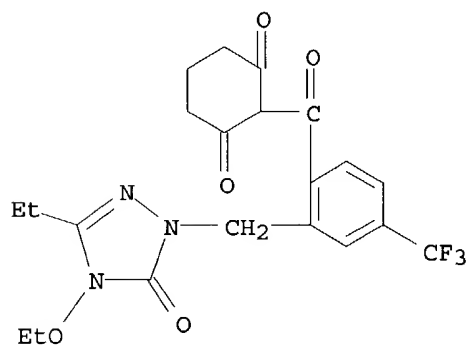
RN 256230-70-3 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4-cyclopropyl-3-ethoxy-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



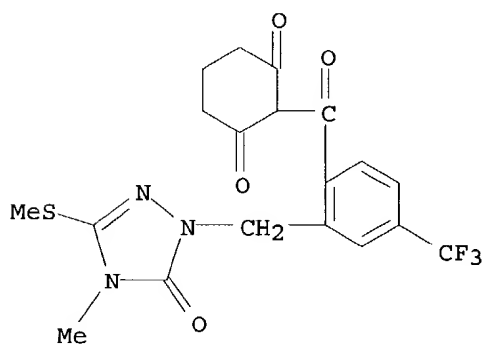
RN 256230-71-4 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4-ethoxy-3-ethyl-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



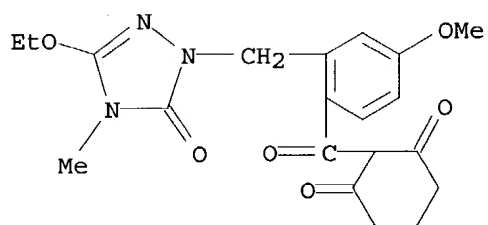
RN 256230-72-5 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-3-(methylthio)-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



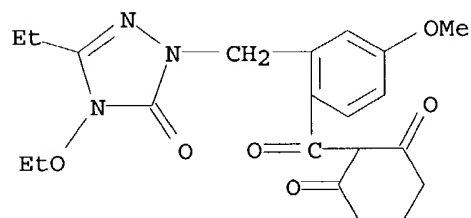
RN 256230-73-6 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3-ethoxy-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-methoxybenzoyl]- (9CI) (CA INDEX NAME)



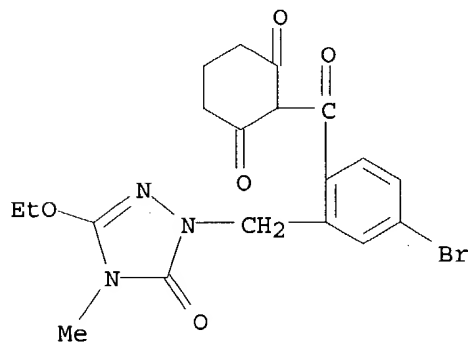
RN 256230-74-7 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4-ethoxy-3-ethyl-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-methoxybenzoyl]- (9CI) (CA INDEX NAME)



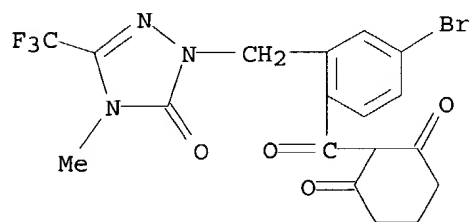
RN 256230-75-8 CAPLUS

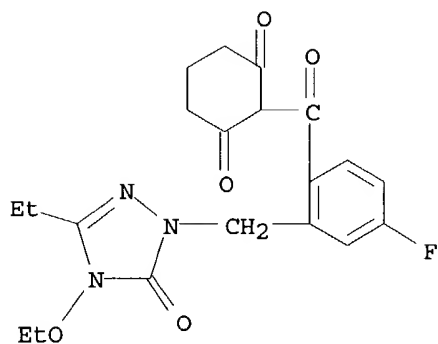
CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[(3-ethoxy-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



RN 256230-76-9 CAPLUS

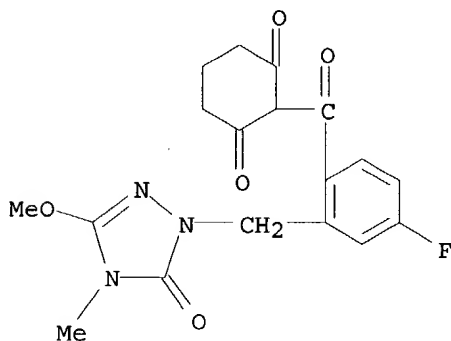
CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[[4,5-dihydro-4-methyl-5-oxo-3-(trifluoromethyl)-1H-1,2,4-triazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)





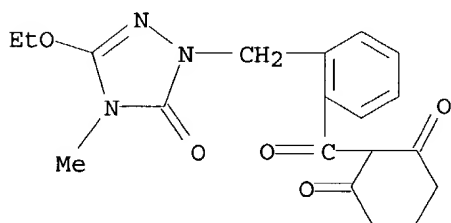
RN 256230-81-6 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4,5-dihydro-3-methoxy-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-fluorobenzoyl]- (9CI) (CA INDEX NAME)



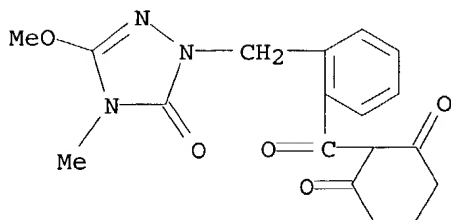
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CN 1,3-Cyclohexanedione, 2-[2-[(3-ethoxy-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



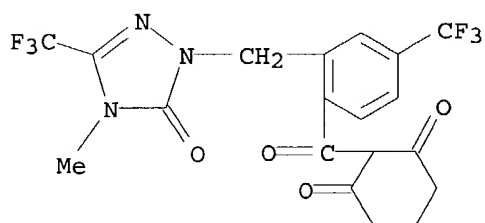
RN 256230-83-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4,5-dihydro-3-methoxy-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



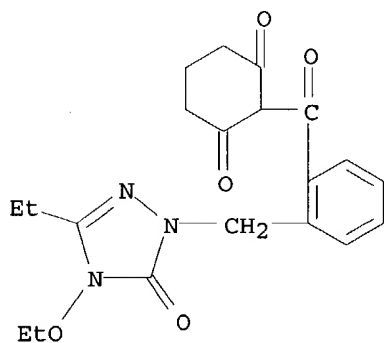
RN 256231-10-4 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-5-oxo-3-(trifluoromethyl)-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



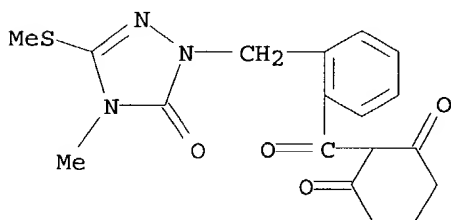
RN 256231-11-5 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4-ethoxy-3-ethyl-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl]methyl]benzoyl]- (9CI) (CA INDEX NAME)



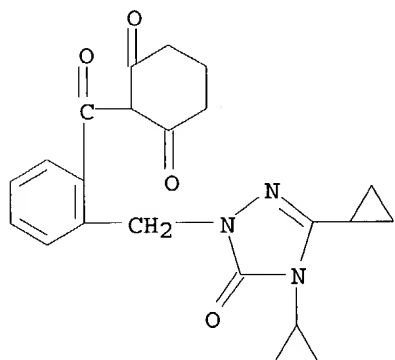
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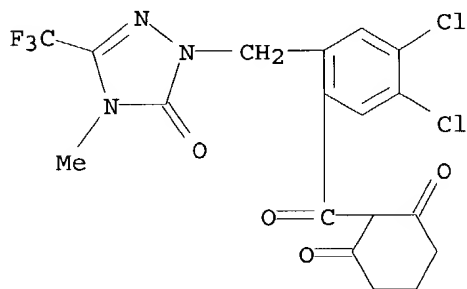
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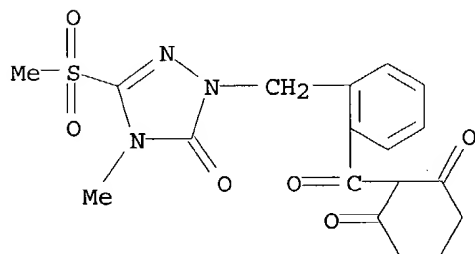
RN 256231-14-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4,5-dichloro-2-[[4,5-dihydro-4-methyl-5-oxo-3-(trifluoromethyl)-1H-1,2,4-triazol-1-yl]methyl]benzoyl]- (9CI) (CA INDEX NAME)



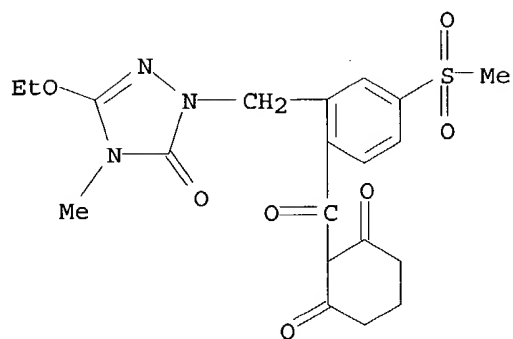
RN 256231-15-9 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-3-(methylsulfonyl)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]benzoyl]- (9CI) (CA INDEX NAME)



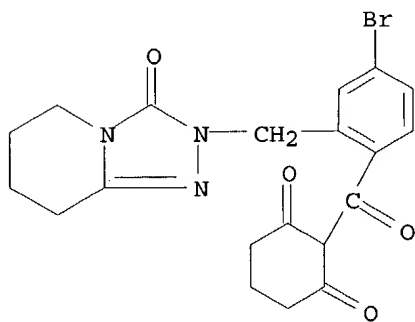
RN 256231-16-0 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3-ethoxy-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



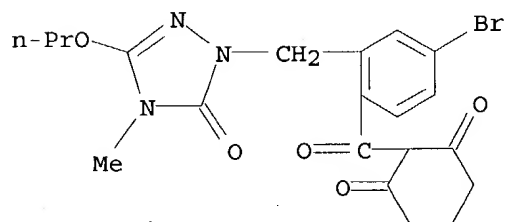
RN 256231-17-1 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[(5,6,7,8-tetrahydro-3-oxo-1,2,4-triazolo[4,3-a]pyridin-2(3H)-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



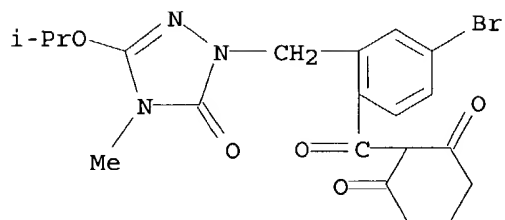
RN 256231-18-2 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[(4,5-dihydro-4-methyl-5-oxo-3-propoxy-1H-1,2,4-triazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



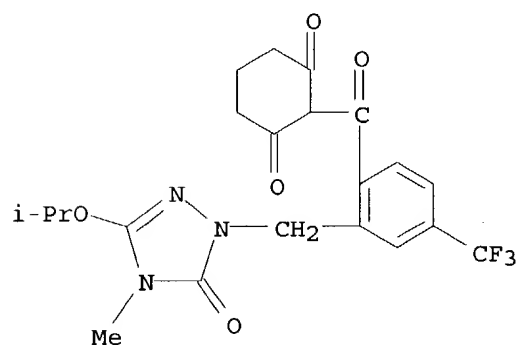
RN 256231-19-3 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[[4,5-dihydro-4-methyl-3-(1-methylethoxy)-5-oxo-1H-1,2,4-triazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



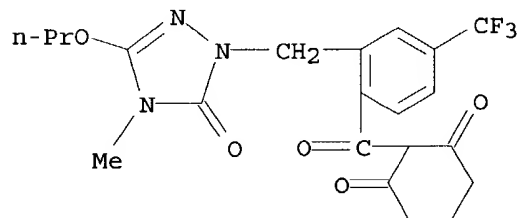
RN 256231-20-6 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-3-(1-methylethoxy)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



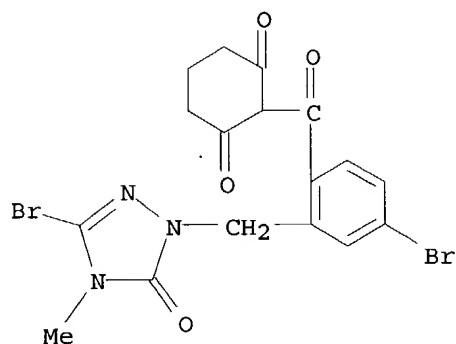
RN 256231-21-7 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-5-oxo-3-propoxy-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



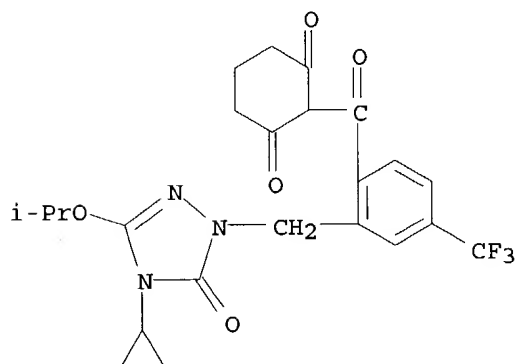
RN 256231-22-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[[3-bromo-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl]methyl]benzoyl]- (9CI) (CA INDEX NAME)



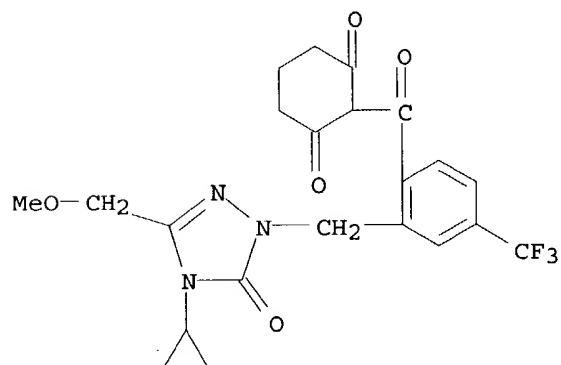
RN 256231-23-9 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4-cyclopropyl-4,5-dihydro-3-(1-methylethoxy)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]- (9CI)
(CA INDEX NAME)



RN 256231-24-0 CAPLUS

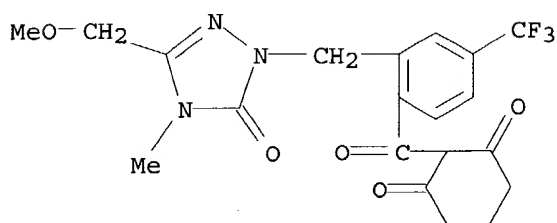
CN 1,3-Cyclohexanedione, 2-[2-[[4-cyclopropyl-4,5-dihydro-3-(methoxymethyl)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



RN 256231-25-1 CAPLUS

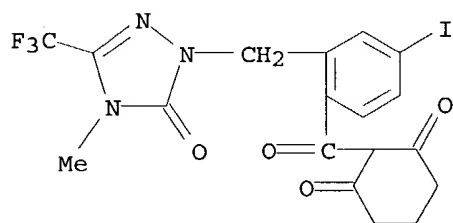
CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-3-(methoxymethyl)-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)

INDEX NAME)



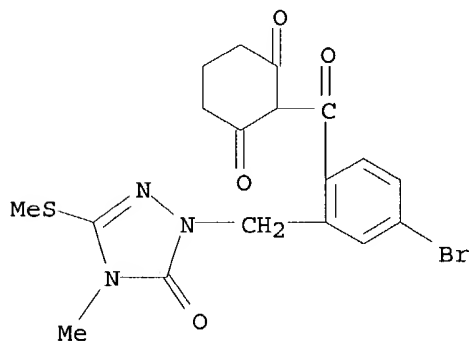
RN 256231-26-2 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-5-oxo-3-(trifluoromethyl)-1H-1,2,4-triazol-1-yl]methyl]-4-iodobenzoyl]- (9CI) (CA INDEX NAME)



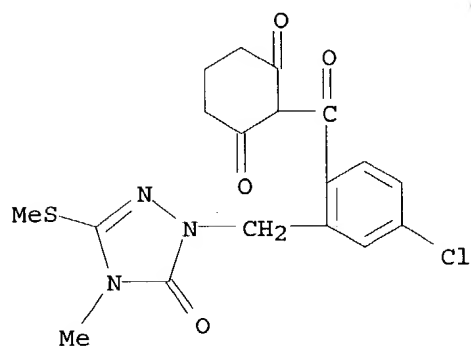
RN 256231-27-3 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[[4,5-dihydro-4-methyl-3-(methylthio)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]benzoyl]- (9CI) (CA INDEX NAME)



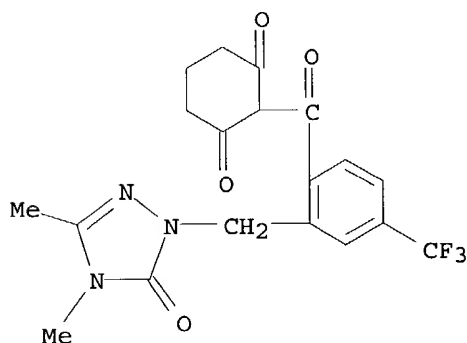
RN 256231-28-4 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-chloro-2-[[4,5-dihydro-4-methyl-3-(methylthio)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]benzoyl]- (9CI) (CA INDEX NAME)



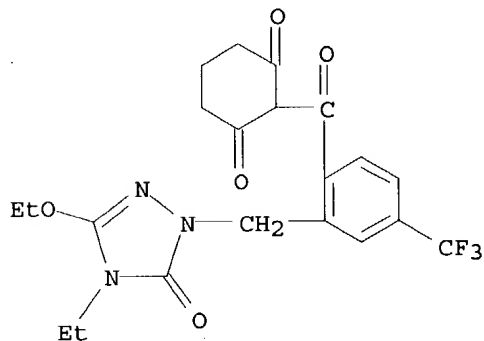
RN 256231-29-5 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4,5-dihydro-3,4-dimethyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



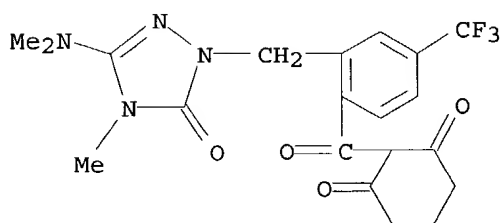
RN 256231-30-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3-ethoxy-4-ethyl-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



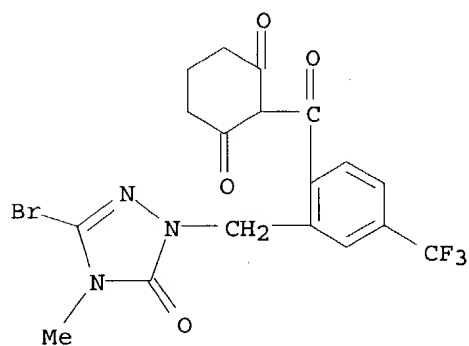
RN 256231-31-9 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[3-(dimethylamino)-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



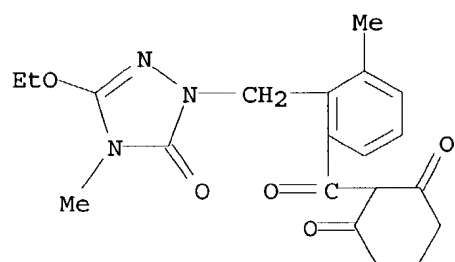
RN 256231-32-0 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3-bromo-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



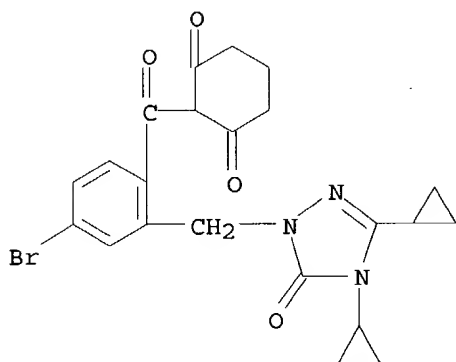
RN 256231-33-1 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3-ethoxy-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-3-methylbenzoyl]- (9CI) (CA INDEX NAME)



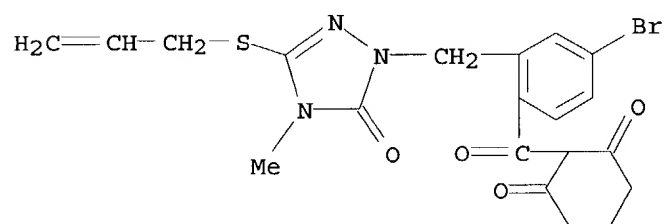
RN 256231-34-2 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[(3,4-dicyclopropyl-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



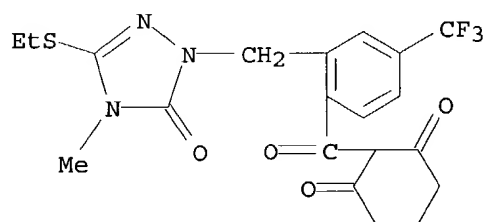
RN 256231-35-3 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[[4,5-dihydro-4-methyl-5-oxo-3-(2-propenylthio)-1H-1,2,4-triazol-1-yl]methyl]benzoyl]- (9CI) (CA INDEX NAME)



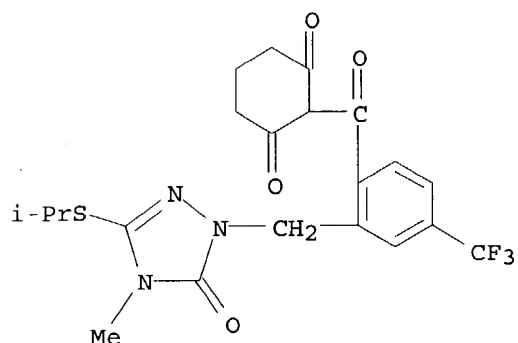
RN 256231-36-4 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[3-(ethylthio)-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



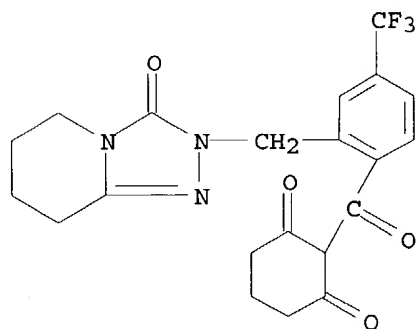
RN 256231-37-5 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-3-[(1-methylethyl)thio]-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



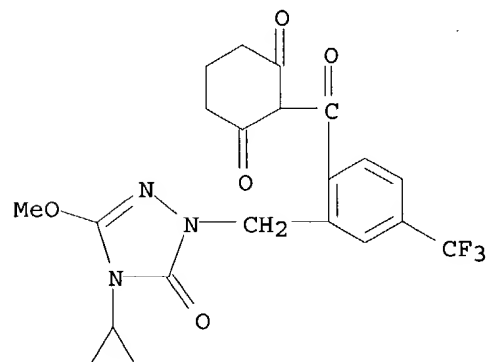
RN 256231-38-6 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(5,6,7,8-tetrahydro-3-oxo-1,2,4-triazolo[4,3-a]pyridin-2(3H)-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



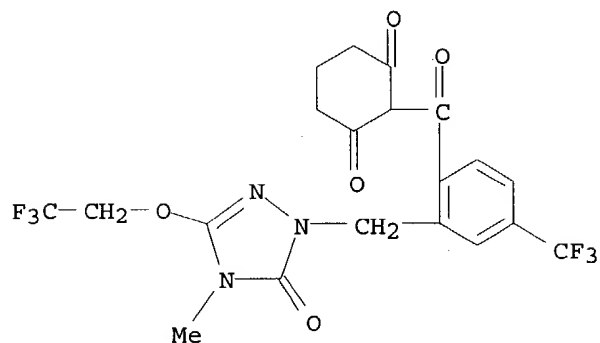
RN 256231-39-7 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4-cyclopropyl-4,5-dihydro-3-methoxy-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



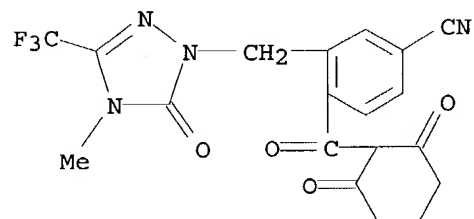
RN 256231-40-0 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-5-oxo-3-(2,2,2-trifluoroethoxy)-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



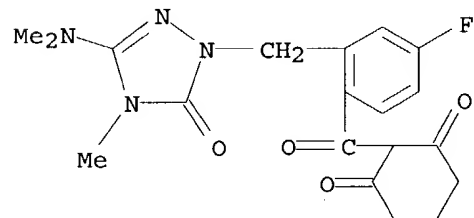
RN 256231-41-1 CAPLUS

CN Benzonitrile, 3-[[4,5-dihydro-4-methyl-5-oxo-3-(trifluoromethyl)-1H-1,2,4-triazol-1-yl]methyl]-4-[(2,6-dioxocyclohexyl)carbonyl]- (9CI) (CA INDEX NAME)



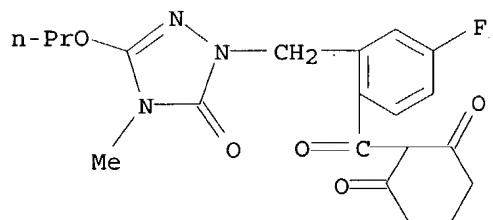
RN 256231-42-2 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[3-(dimethylamino)-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-fluorobenzoyl]- (9CI) (CA INDEX NAME)



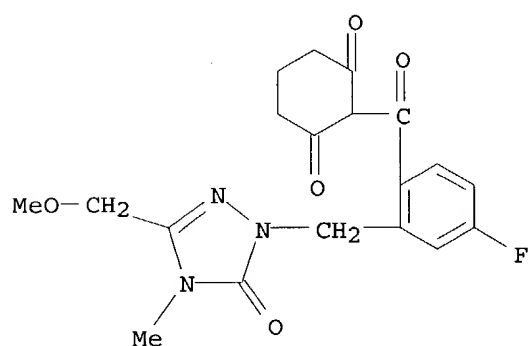
RN 256231-43-3 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-5-oxo-3-propoxy-1H-1,2,4-triazol-1-yl]methyl]-4-fluorobenzoyl]- (9CI) (CA INDEX NAME)



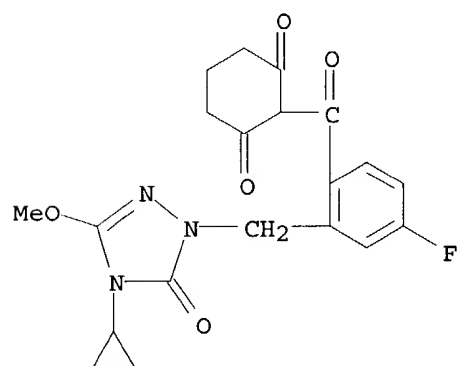
RN 256231-44-4 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-3-(methoxymethyl)-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-fluorobenzoyl]- (9CI) (CA INDEX NAME)



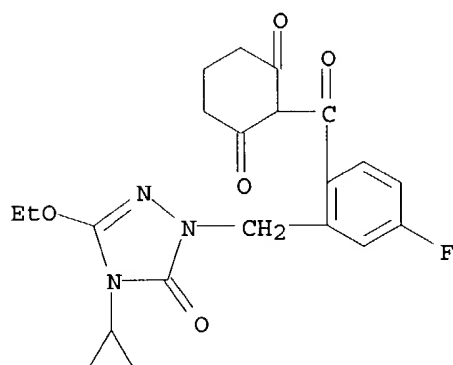
RN 256231-45-5 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4-cyclopropyl-4,5-dihydro-3-methoxy-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-fluorobenzoyl]- (9CI) (CA INDEX NAME)



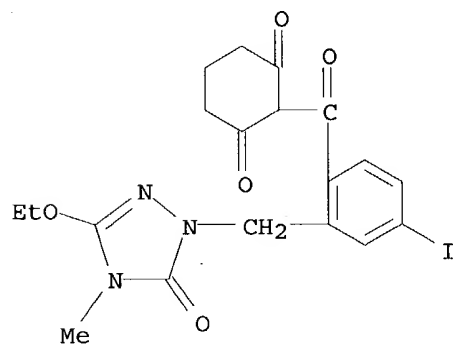
RN 256231-46-6 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4-cyclopropyl-3-ethoxy-4,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-fluorobenzoyl]- (9CI) (CA INDEX NAME)



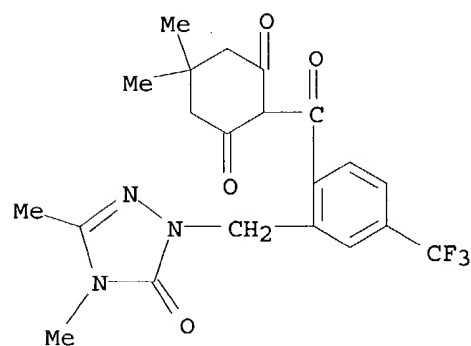
RN 256231-47-7 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3-ethoxy-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-iodobenzoyl]- (9CI) (CA INDEX NAME)



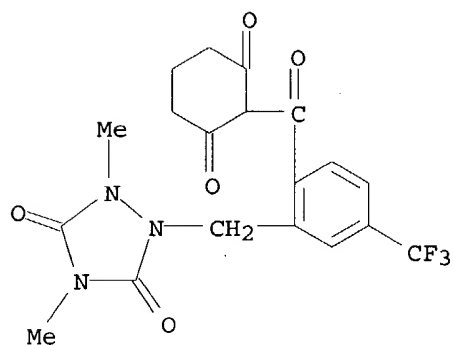
RN 256231-51-3 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4,5-dihydro-3,4-dimethyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]-5,5-dimethyl- (9CI) (CA INDEX NAME)



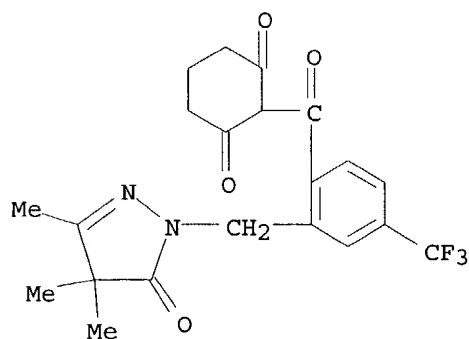
RN 256231-52-4 CAPLUS

CN 1,2,4-Triazolidine-3,5-dione, 1-[[2-[(2,6-dioxocyclohexyl)carbonyl]-5-(trifluoromethyl)phenyl]methyl]-2,4-dimethyl- (9CI) (CA INDEX NAME)



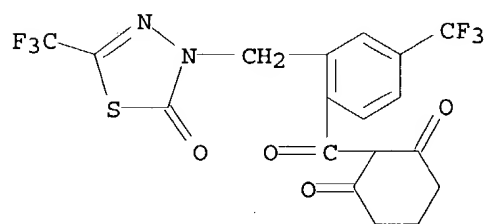
RN 256231-53-5 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4,5-dihydro-3,4,4-trimethyl-5-oxo-1H-pyrazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



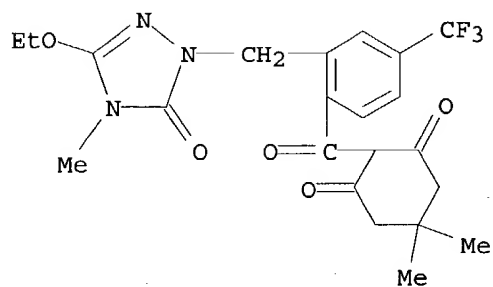
RN 256231-55-7 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[2-oxo-5-(trifluoromethyl)-1,3,4-thiadiazol-3(2H)-yl)methyl]-4-(trifluoromethyl)benzoyl]- (9CI) (CA INDEX NAME)



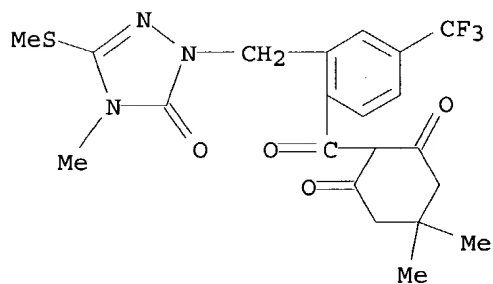
RN 256231-56-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(3-ethoxy-4,5-dihydro-4-methyl-5-oxo-1H-1,2,4-triazol-1-yl)methyl]-4-(trifluoromethyl)benzoyl]-5,5-dimethyl- (9CI) (CA INDEX NAME)



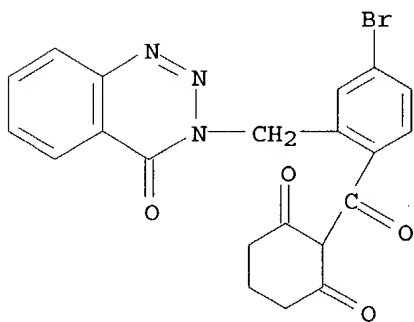
RN 256231-57-9 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[[4,5-dihydro-4-methyl-3-(methoxythio)-5-oxo-1H-1,2,4-triazol-1-yl]methyl]-4-(trifluoromethyl)benzoyl]-5,5-dimethyl- (9CI)
(CA INDEX NAME)



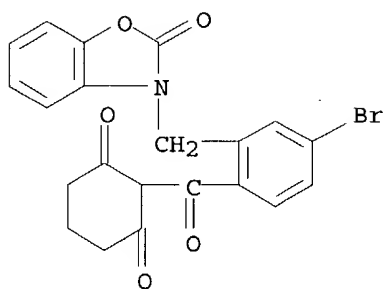
RN 256231-58-0 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



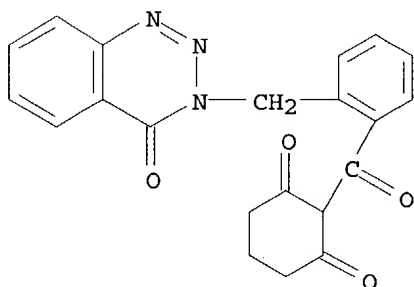
RN 256231-59-1 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-bromo-2-[(2-oxo-3(2H)-benzoxazolyl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



RN 256412-83-6 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl]benzoyl]- (9CI) (CA INDEX NAME)



=> FIL REGISTRY

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

28.16

184.63

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-3.47

-3.47

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STRUCTURE FILE UPDATES: 19 MAR 2004 HIGHEST RN 665776-10-3

DICTIONARY FILE UPDATES: 19 MAR 2004 HIGHEST RN 665776-10-3

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

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Crossover limits have been increased. See HELP CROSSOVER for details.

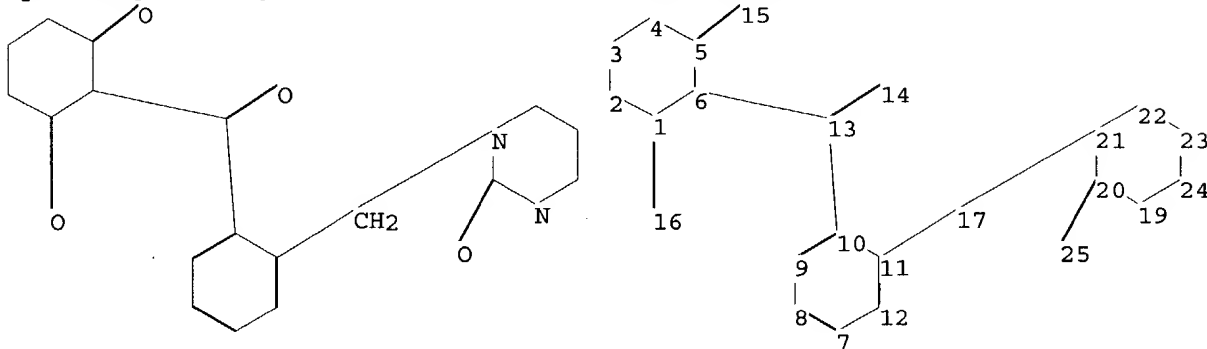
Experimental and calculated property data are now available. For more

information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:

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=>

Uploading C:\Program Files\Stnexp\Queries\09743876a.str



chain nodes :

13 14 15 16 17 25

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 19 20 21 22 23 24

chain bonds :

1-16 5-15 6-13 10-13 11-17 13-14 17-21 20-25

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 19-20 19-24
20-21 21-22 22-23 23-24

exact/norm bonds :

1-16 5-15 13-14 19-20 19-24 20-21 20-25 21-22 22-23 23-24

exact bonds :

1-2 1-6 2-3 3-4 4-5 5-6 6-13 10-13 11-17 17-21

normalized bonds :

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isolated ring systems :

containing 1 : 7 : 19 :

Match level :

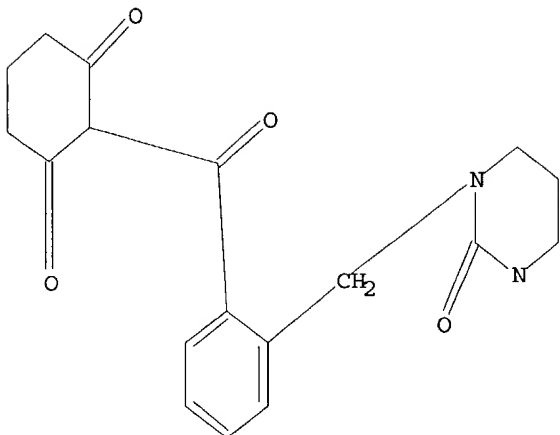
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11:Atom 12:Atom 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 19:CLASS
20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:CLASS

L7 STRUCTURE UPLOADED

=> d l7

L7 HAS NO ANSWERS

L7 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l7

SAMPLE SEARCH INITIATED 10:38:52 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 13 TO ITERATE

100.0% PROCESSED 13 ITERATIONS
SEARCH TIME: 00.00.17

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 44 TO 476
PROJECTED ANSWERS: 0 TO 0

L8 0 SEA SSS SAM L7

=> s l7 sss full

FULL SEARCH INITIATED 10:39:19 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 127 TO ITERATE

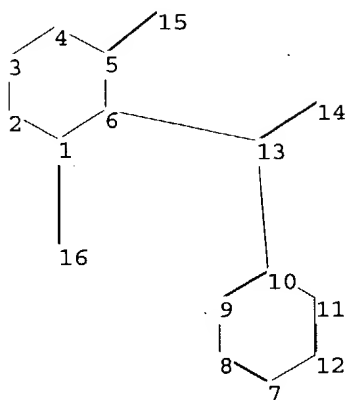
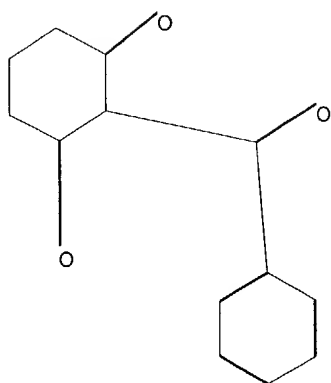
100.0% PROCESSED 127 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

L9 0 SEA SSS FUL L7

=>

Uploading C:\Program Files\Stnexp\Queries\09743876b.str



chain nodes :

13 14 15 16

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12

chain bonds :

1-16 5-15 6-13 10-13 13-14

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12

exact/norm bonds :

1-16 5-15 13-14

exact bonds :

1-2 1-6 2-3 3-4 4-5 5-6 6-13 10-13

normalized bonds :

7-8 7-12 8-9 9-10 10-11 11-12

isolated ring systems :

containing 1 : 7 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom

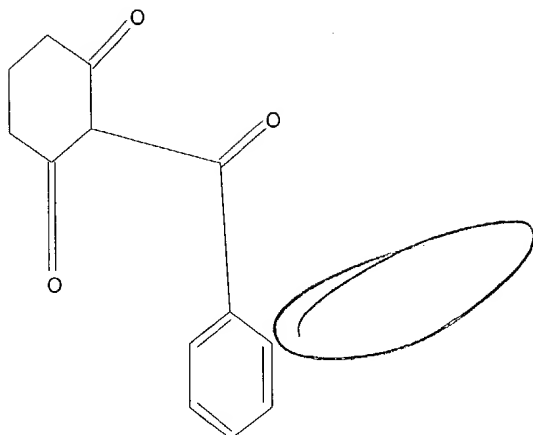
11:Atom 12:Atom 13:CLASS 14:CLASS 15:CLASS 16:CLASS

L10 STRUCTURE UPLOADED

=> d l10

L10 HAS NO ANSWERS

L10 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l10

SAMPLE SEARCH INITIATED 10:40:54 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 269 TO ITERATE

100.0% PROCESSED 269 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

50 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 4396 TO 6364
PROJECTED ANSWERS: 1435 TO 2645

L11 50 SEA SSS SAM L10

=> s l10 sss full

FULL SEARCH INITIATED 10:41:01 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 5742 TO ITERATE

100.0% PROCESSED 5742 ITERATIONS
SEARCH TIME: 00.00.01

2054 ANSWERS

L12 2054 SEA SSS FUL L10

=> FIL CAPLUS
COST IN U.S. DOLLARS
FULL ESTIMATED COST

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 311.68 | 496.31 |

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
CA SUBSCRIBER PRICE

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 0.00 | -3.47 |

FILE 'CAPLUS' ENTERED AT 10:41:06 ON 22 MAR 2004
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 22 Mar 2004 VOL 140 ISS 13
FILE LAST UPDATED: 21 Mar 2004 (20040321/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l12

L13 436 L12

=> s l13 and py<=1999

19722357 PY<=1999

L14 236 L13 AND PY<=1999

=> s l14 and py/dt

0 PY/DT

L15 0 L14 AND PY/DT

=> s l14 and p/dt

4307626 P/DT

L16 146 L14 AND P/DT

=> s l16 and plant

700069 PLANT

392014 PLANTS

869154 PLANT

(PLANT OR PLANTS)

L17 23 L16 AND PLANT

=> s l17 and pc/us

'US' IS NOT A VALID FIELD CODE

0 PC/US

L18 0 L17 AND PC/US

=> s l17 and us/pc

1263906 US/PC

L19 12 L17 AND US/PC

=> d l19 ibib abs hitstr tot

L19 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:603812 CAPLUS

DOCUMENT NUMBER: 131:195770

TITLE: Synergistic herbicidal compositions

INVENTOR(S): Zoschke, Andreas; Nevill, David J.; Stehli, Andreas

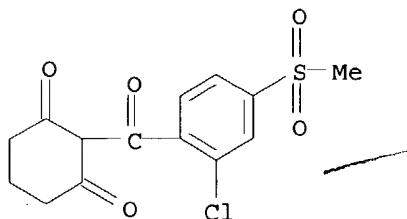
PATENT ASSIGNEE(S): Novartis A.-G., Switz.

SOURCE: Ger. Offen., 46 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

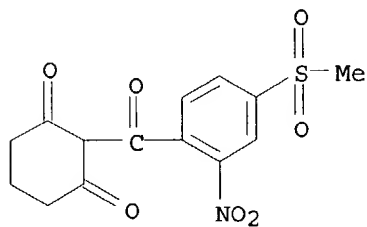
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|----------|--------------------|--------------|
| DE 19919951 | A1 | 19990916 | DE 1999-19919951 | 19990430 <-- |
| WO 2000027203 | A1 | 20000518 | WO 1999-EP8559 | 19991108 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| BR 9915141 | A | 20010807 | BR 1999-15141 | 19991108 |
| EP 1128729 | A1 | 20010905 | EP 1999-971666 | 19991108 |
| EP 1128729 | B1 | 20030521 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 2002529379 | T2 | 20020910 | JP 2000-580451 | 19991108 |
| AU 760278 | B2 | 20030508 | AU 2000-13814 | 19991108 |
| AT 240650 | E | 20030615 | AT 1999-971666 | 19991108 |
| US 2002004457 | A1 | 20020110 | US 2001-852484 | 20010510 <-- |
| PRIORITY APPLN. INFO.: | | | | |
| | | | DE 1998-19851854 A | 19981110 |
| | | | DE 1998-19859224 A | 19981221 |
| | | | DE 1999-19915013 A | 19990401 |
| | | | DE 1999-19919951 A | 19990430 |
| | | | WO 1999-EP8559 W | 19991108 |
| AB | The title compns. comprise a herbicide which inhibits protoporphyrinogen oxidase and a 2nd pesticide (herbicide, fungicide or insecticide/acaricide). The compns. are useful for weed control in crops resistant to protoporphyrinogen oxidase inhibitors. | | | |
| IT | 99105-77-8D, Sulcotrione, mixts. with protoporphyrinogen oxidase inhibitors 104206-82-8D, Mesotrione, mixts. with protoporphyrinogen oxidase inhibitors 187087-40-7D, Metolachlor-mesotrione mixture, mixts. with protoporphyrinogen oxidase inhibitors 223671-66-7D, (S)-Metolachlor-mesotrione mixture, mixts. with protoporphyrinogen oxidase inhibitors RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (synergistic herbicidal compns.) | | | |
| RN | 99105-77-8 CAPLUS | | | |
| CN | 1,3-Cyclohexanedione, 2-[2-chloro-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME) | | | |



RN 104206-82-8 CAPLUS

09743876

CN 1,3-Cyclohexanedione, 2-[4-(methylsulfonyl)-2-nitrobenzoyl]- (9CI) (CA INDEX NAME)



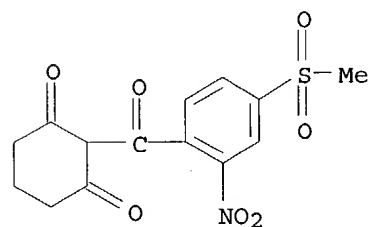
RN 187087-40-7 CAPLUS

CN Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-, mixt. with 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione (9CI) (CA INDEX NAME)

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CRN 104206-82-8

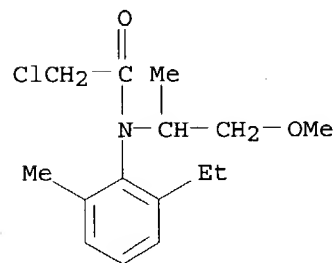
CMF C14 H13 N O7 S



CM 2

CRN 51218-45-2

CMF C15 H22 Cl N O2

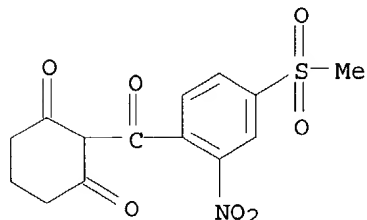


RN 223671-66-7 CAPLUS

CN Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-[(1S)-2-methoxy-1-methylethyl]-, mixt. with 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione (9CI) (CA INDEX NAME)

CM 1

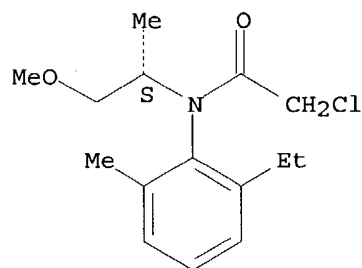
CRN 104206-82-8
CMF C14 H13 N O7 S



CM 2

CRN 87392-12-9
CMF C15 H22 Cl N O2

Absolute stereochemistry. Rotation (-).



L19 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:561821 CAPLUS
DOCUMENT NUMBER: 131:181119
TITLE: Synergistic herbicidal compositions
INVENTOR(S): Zoschke, Andreas; Nevill, David J.; Stehli, Andreas
PATENT ASSIGNEE(S): Novartis A.-G., Switz.
SOURCE: Ger. Offen., 44 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|--------------|
| DE 19915013 | A1 | 19990826 | DE 1999-19915013 | 19990401 <-- |
| WO 2000027203 | A1 | 20000518 | WO 1999-EP8559 | 19991108 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, | | | | |

03/22/2004

DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

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|------------|----|----------|----------------|----------|
| BR 9915141 | A | 20010807 | BR 1999-15141 | 19991108 |
| EP 1128729 | A1 | 20010905 | EP 1999-971666 | 19991108 |
| EP 1128729 | B1 | 20030521 | | |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

| | | | | |
|---------------|----|----------|----------------|--------------|
| JP 2002529379 | T2 | 20020910 | JP 2000-580451 | 19991108 |
| AU 760278 | B2 | 20030508 | AU 2000-13814 | 19991108 |
| AT 240650 | E | 20030615 | AT 1999-971666 | 19991108 |
| US 2002004457 | A1 | 20020110 | US 2001-852484 | 20010510 <-- |

PRIORITY APPLN. INFO.:

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|------------------|---|----------|
| DE 1998-19851854 | A | 19981110 |
| DE 1998-19859224 | A | 19981221 |
| DE 1999-19915013 | A | 19990401 |
| DE 1999-19919951 | A | 19990430 |
| WO 1999-EP8559 | W | 19991108 |

AB The title composition comprises a protoporphyrinogen oxidase-inhibiting herbicide (fluazolate, thidiazimin, acifluorfen, aclonifen, bifenox, chloronitrophen, ethoxyfen, azafenidin, cinidon-Et, nipyraclufen, etc.) and a co-herbicide, such as a herbicide, fungicide, insecticide or acaricide. The compns. are usable against crops resistant to protoporphyrinogen oxidase inhibitors.

IT **187087-40-7 223671-66-7**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal composition)

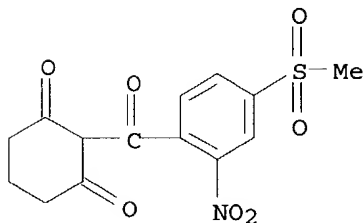
RN 187087-40-7 CAPLUS

CN Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-, mixt. with 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione (9CI) (CA INDEX NAME)

CM 1

CRN 104206-82-8

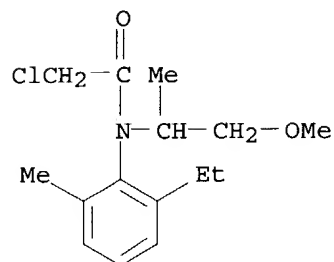
CMF C14 H13 N O7 S



CM 2

CRN 51218-45-2

CMF C15 H22 Cl N O2



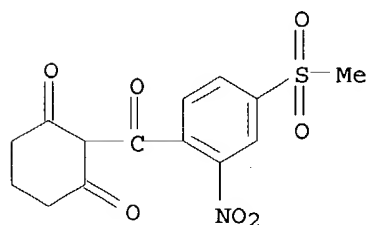
RN 223671-66-7 CAPLUS

CN Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-[(1S)-2-methoxy-1-methylethyl]-, mixt. with 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione (9CI) (CA INDEX NAME)

CM 1

CRN 104206-82-8

CMF C14 H13 N O7 S

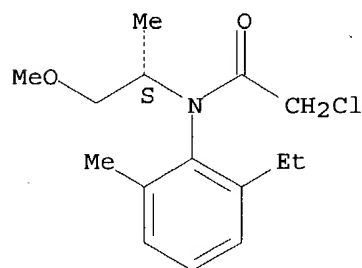


CM 2

CRN 87392-12-9

CMF C15 H22 Cl N O2

Absolute stereochemistry. Rotation (-).

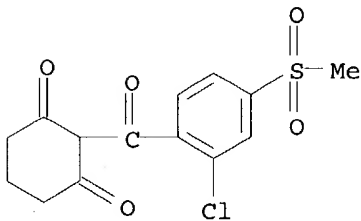


IT 99105-77-8D, Sulcotrione, mixts. with protoporphyrinogen oxidase inhibitors 104206-82-8D, Mesotrione, mixts. with protoporphyrinogen oxidase inhibitors

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (synergistic herbicidal compns.)

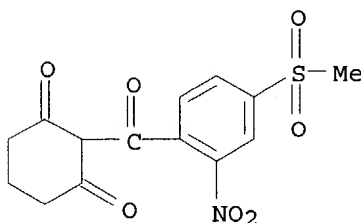
RN 99105-77-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



RN 104206-82-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(methylsulfonyl)-2-nitrobenzoyl]- (9CI) (CA INDEX NAME)



L19 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:375518 CAPLUS

DOCUMENT NUMBER: 131:31801

TITLE: Preparation of acylated cyclic 1,3-dicarbonyl compounds by rearrangement of enol esters

INVENTOR(S): Brown, Stephen Martin; Bentley, Thomas William; Jones, Robert Oliver

PATENT ASSIGNEE(S): Zeneca Limited, UK

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 9928282 | A1 | 19990610 | WO 1998-GB3458 | 19981117 <-- |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 9911671 | A1 | 19990616 | AU 1999-11671 | 19981117 <-- |
| EP 1034159 | A1 | 20000913 | EP 1998-954618 | 19981117 |
| EP 1034159 | B1 | 20030122 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | |

IE, FI

| | | | | |
|---------------|----|----------|------------------|--------------|
| BR 9815026 | A | 20001003 | BR 1998-15026 | 19981117 |
| JP 2001524539 | T2 | 20011204 | JP 2000-523183 | 19981117 |
| AT 231483 | E | 20030215 | AT 1998-954618 | 19981117 |
| ES 2187073 | T3 | 20030516 | ES 1998-954618 | 19981117 |
| PT 1034159 | T | 20030630 | PT 1998-98954618 | 19981117 |
| CN 1116266 | B | 20030730 | CN 1998-809707 | 19981117 |
| TW 528747 | B | 20030421 | TW 1998-87119385 | 19981123 |
| US 6218579 | B1 | 20010417 | US 2000-529743 | 20000418 <-- |

PRIORITY APPLN. INFO.: GB 1997-25135 A 19971127
WO 1998-GB3458 W 19981117

OTHER SOURCE(S): CASREACT 131:31801; MARPAT 131:31801

GI For diagram(s), see printed CA Issue.

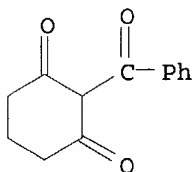
AB The title compds. [I; R = (un)substituted Ph, (un)substituted C3-6 cycloalkyl; Q = (un)substituted 5- or 6-membered saturated carbocyclic ring], especially benzoyl- and cycloalkyl-1,3-cyclohexanediones useful as herbicides and **plant** growth regulators (no data), were prepared by rearrangement of enol esters (II; Q, R as defined) in a (di)polar aprotic or aromatic hydrocarbon solvent in the presence of a moderate base and an azole instead of a cyanide catalyst. For example, stirring a mixture of 2.31 g 1,3-cyclohexanedione, 1.5 g K₂CO₃ and 20 mL MeCN for 3 h at 35°, adding 1.5 g PhCOCl and stirring for 30 min, adding 2 g K₂CO₃ and 0.035 g 1,2,4-triazole and stirring the whole for 16 h at 25° gave 2-benzoyl-1,3-cyclohexanedione in 90% yield.

IT 69629-50-1P, 2-Benzoyl-1,3-cyclohexanedione 99105-77-8P
104206-82-8P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of acylated cyclic 1,3-dicarbonyl compds. by rearrangement of enol esters in presence of potassium carbonate and triazole)

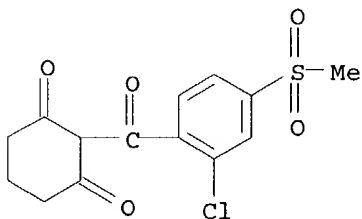
RN 69629-50-1 CAPLUS

CN 1,3-Cyclohexanedione, 2-benzoyl- (9CI) (CA INDEX NAME)



RN 99105-77-8 CAPLUS

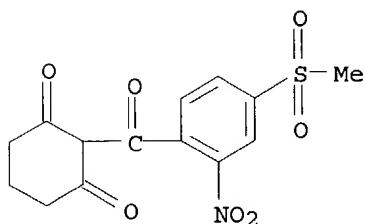
CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



RN 104206-82-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(methylsulfonyl)-2-nitrobenzoyl]- (9CI) (CA

INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:311457 CAPLUS

DOCUMENT NUMBER: 130:307951

TITLE: Synergistic herbicidal compositions

INVENTOR(S): Nevill, David J.; Zoschke, Andreas; Stehli, Andreas

PATENT ASSIGNEE(S): Novartis A.-G., Switz.

SOURCE: Ger. Offen., 44 pp.

CODEN: GWXXBX

DOCUMENT TYPE: **Patent**

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|--------------------|--------------|
| DE 19859224 | A1 | 19990506 | DE 1998-19859224 | 19981221 <-- |
| WO 2000027203 | A1 | 20000518 | WO 1999-EP8559 | 19991108 |
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| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| BR 9915141 | A | 20010807 | BR 1999-15141 | 19991108 |
| EP 1128729 | A1 | 20010905 | EP 1999-971666 | 19991108 |
| EP 1128729 | B1 | 20030521 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 2002529379 | T2 | 20020910 | JP 2000-580451 | 19991108 |
| AU 760278 | B2 | 20030508 | AU 2000-13814 | 19991108 |
| AT 240650 | E | 20030615 | AT 1999-971666 | 19991108 |
| US 2002004457 | A1 | 20020110 | US 2001-852484 | 20010510 <-- |
| PRIORITY APPLN. INFO.: | | | | |
| | | | DE 1998-19851854 A | 19981110 |
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| | | | DE 1999-19915013 A | 19990401 |
| | | | DE 1999-19919951 A | 19990430 |
| | | | WO 1999-EP8559 W | 19991108 |

AB The title compns., active against weeds resistant to herbicides which inhibit protoporphyrinogen oxidase, comprise a protoporphyrinogen oxidase-inhibiting herbicide, such as a di-Ph ether, imide, phenylpyrazole, fluazolate or thidiazimin, and a co-herbicide (atrazine,

terbuthylazine, metolachlor, terbutryn, simazine, etc.). The herbicidal mixts. are useful in corn, sugar beet, soybean, rape, cotton, sunflower, cereals, rice and sugarcane.

IT 187087-40-7 223671-66-7

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicidal composition)

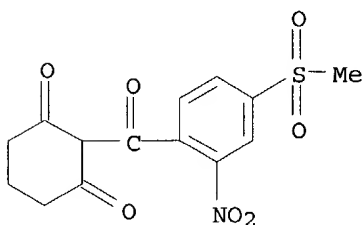
RN 187087-40-7 CAPLUS

CN Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-, mixt. with 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione (9CI) (CA INDEX NAME)

CM 1

CRN 104206-82-8

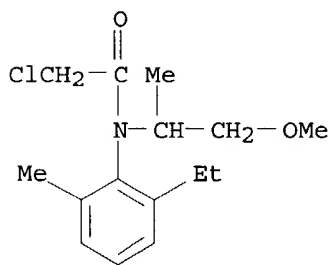
CMF C14 H13 N O7 S



CM 2

CRN 51218-45-2

CMF C15 H22 Cl N O2



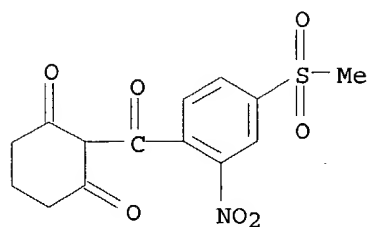
RN 223671-66-7 CAPLUS

CN Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-[(1S)-2-methoxy-1-methylethyl]-, mixt. with 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione (9CI) (CA INDEX NAME)

CM 1

CRN 104206-82-8

CMF C14 H13 N O7 S

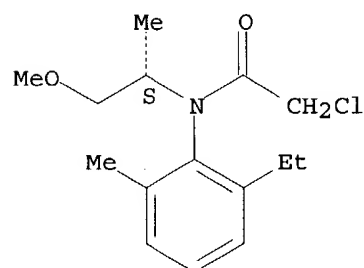


CM 2

CRN 87392-12-9

CMF C15 H22 Cl N O2

Absolute stereochemistry. Rotation (-).

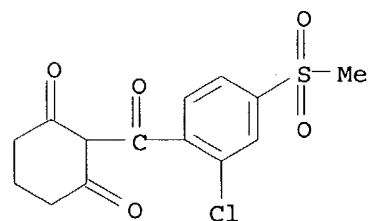


IT 99105-77-8D, Sulcotrione, mixts. with protoporphyrinogen oxidase inhibitors 104206-82-8D, Mesotrione, mixts. with protoporphyrinogen oxidase inhibitors

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (synergistic herbicidal comps.)

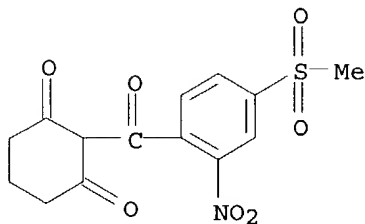
RN 99105-77-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



RN 104206-82-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(methylsulfonyl)-2-nitrobenzoyl]- (9CI) (CA INDEX NAME)



L19 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:254129 CAPLUS

DOCUMENT NUMBER: 130:263543

TITLE: Synergistic herbicidal mixtures.

INVENTOR(S): Nevill, David J.; Zoschke, Andreas; Stehli, Andreas

PATENT ASSIGNEE(S): Novartis A.-G., Switz.

SOURCE: Ger. Offen., 40 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 4

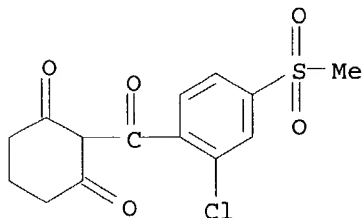
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|----------|--------------------|--------------|
| DE 19851854 | A1 | 19990415 | DE 1998-19851854 | 19981110 <-- |
| WO 2000027203 | A1 | 20000518 | WO 1999-EP8559 | 19991108 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| BR 9915141 | A | 20010807 | BR 1999-15141 | 19991108 |
| EP 1128729 | A1 | 20010905 | EP 1999-971666 | 19991108 |
| EP 1128729 | B1 | 20030521 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 2002529379 | T2 | 20020910 | JP 2000-580451 | 19991108 |
| AU 760278 | B2 | 20030508 | AU 2000-13814 | 19991108 |
| AT 240650 | E | 20030615 | AT 1999-971666 | 19991108 |
| ZA 2001003193 | A | 20020419 | ZA 2001-3193 | 20010419 |
| US 2002004457 | A1 | 20020110 | US 2001-852484 | 20010510 <-- |
| PRIORITY APPLN. INFO.: | | | | |
| | | | DE 1998-19851854 A | 19981110 |
| | | | DE 1998-19859224 A | 19981221 |
| | | | DE 1999-19915013 A | 19990401 |
| | | | DE 1999-19919951 A | 19990430 |
| | | | WO 1999-EP8559 W | 19991108 |
| AB | The title mixts. comprise a protoporphyrinogen oxidase-inhibiting herbicide (di-Ph ether, imide or phenylpyrazole) and a second coherbicide. The mixts. are especially useful for weed control in protoporphyrinogen oxidase-inhibitor-resistant corn, sugar beet, soybean, rape, cotton, sunflower, cereals, rice and sugarcane. | | | |
| IT | 99105-77-8D, Sulcotrione, mixts. with protoporphyrinogen oxidase inhibitors 104206-82-8D, Mesotrione, mixts. with | | | |

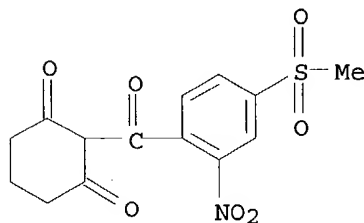
protoporphyrinogen oxidase inhibitors

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicides)

RN 99105-77-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(methylsulfonyl)benzoyl]- (9CI) (CA
INDEX NAME)

RN 104206-82-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(methylsulfonyl)-2-nitrobenzoyl]- (9CI) (CA
INDEX NAME)

L19 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:509062 CAPLUS

DOCUMENT NUMBER: 129:132550

TITLE: Additive composition for agrochemicals

INVENTOR(S): Dufau, Ghislain; Lauilhe, Jean-Paul

PATENT ASSIGNEE(S): Action Pin, Fr.

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: **Patent**

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|--|----------|-----------------|--------------|
| WO 9831223 | A1 | 19980723 | WO 1998-FR96 | 19980119 <-- |
| W: | AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | |
| FR 2758436 | A1 | 19980724 | FR 1997-546 | 19970120 <-- |
| FR 2758436 | B1 | 20000407 | | |

AU 9859936 A1 19980807 AU 1998-59936 19980119 <--
 EP 961546 A1 19991208 EP 1998-903090 19980119 <--
 EP 961546 B1 20030903

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE

AT 248509 E 20030915 AT 1998-903090 19980119

US 6291401 B1 20010918 US 1999-341876 19991012 <--

PRIORITY APPLN. INFO.:

FR 1997-546 A 19970120

WO 1998-FR96 W 19980119

AB The invention concerns the use of a composition containing a mixture of: (i) at least

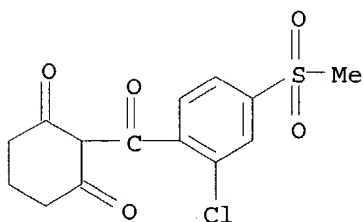
a fatty acid ester or alkoxyated fatty acid; and (ii) at least a terpenic derivative, such as pine oil, as additive enhancing the efficacy of an agrochem., in particular a herbicide, fungicide, insecticide or **plant** growth regulator.

IT 99105-77-8, Mikado

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (additive composition for)

RN 99105-77-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L19 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:324900 CAPLUS

DOCUMENT NUMBER: 129:24150

TITLE: Preparation of transgenic **plants** resistant to multiple classes of herbicides

INVENTOR(S): Thompson, Paul Anthony; Knight, Mary Elizabeth; Jepson, Ian; Thomas, Paul Graham; Hawkes, Timothy Robert

PATENT ASSIGNEE(S): Zeneca Ltd., UK; Thompson, Paul Anthony; Knight, Mary Elizabeth; Jepson, Ian; Thomas, Paul Graham; Hawkes, Timothy Robert

SOURCE: PCT Int. Appl., 91 pp.

CODEN: PIXXD2

DOCUMENT TYPE: **Patent**

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|--------------|
| WO 9820144 | A2 | 19980514 | WO 1997-GB2996 | 19971031 <-- |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, | | | | |

US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,
 GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,
 GN, ML, MR, NE, SN, TD, TG

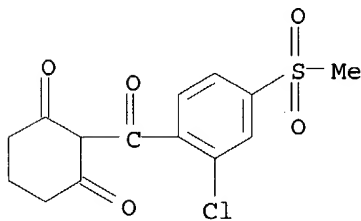
| | | | | | |
|--|----|----------|----------------|----------|-----|
| AU 9747895 | A1 | 19980529 | AU 1997-47895 | 19971031 | <-- |
| EP 946737 | A2 | 19991006 | EP 1997-910550 | 19971031 | <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| BR 9712695 | A | 19991019 | BR 1997-12695 | 19971031 | <-- |
| CN 1236394 | A | 19991124 | CN 1997-199541 | 19971031 | <-- |
| NZ 335101 | A | 20001124 | NZ 1997-335101 | 19971031 | |
| JP 2001503625 | T2 | 20010321 | JP 1998-521131 | 19971031 | |
| KR 2000053140 | A | 20000825 | KR 1999-704072 | 19990507 | |
| US 2003041357 | A1 | 20030227 | US 2001-791489 | 20010223 | <-- |

PRIORITY APPLN. INFO.:
 GB 1996-23248 A 19961107
 GB 1996-25957 A 19961213
 GB 1997-3855 A 19970225
 WO 1997-GB2996 W 19971031
 US 1999-297706 B3 19990505

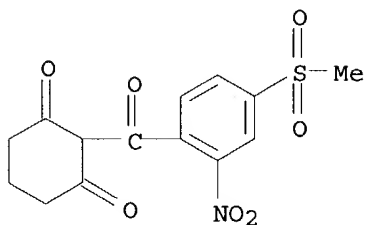
AB Described is a method for the preparation of a transgenic **plant** containing ≥ 2 herbicide resistance-associated genes, each under expression control of a **plant** operable promoter and terminator. Preferably, the first gene confers resistance to a pre-emergence herbicide and the second gene confers the resistance to a post-emergence herbicide. Cloning of the gene for 4-hydroxy Ph pyruvate dioxygenase (4-HPPD) from *Pseudomonas fluorescens* strain 87-79 or *Synechocystis* strain PCC6803 was shown. By expression of multiple genes selected from 4-HPPD, 5-enol-pyruvyl-3-phosphoshikimate synthetase (EPSPS), glutathione S transferase (GST), superoxide dismutase (SOD), phosphinothricin acetyl transferase (PAT), etc., a transgenic **plant** resistant multiple classes of herbicide may be prepared. Preparation of transgenic maize resistant to glufosinate and anilide type herbicides by introducing the GST and PAT genes into maize was demonstrated. Optionally, the transgenic **plants** may be further provided with the genes associated with resistance to insects, desiccation, fungal infection, or viral infection.

IT **99105-77-8**, Sulcotrione **104206-82-8**, ZA 1296
 RL: ADV (Adverse effect, including toxicity); AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (post-emergence herbicide; preparation of transgenic **plants** resistant to multiple classes of herbicides)

RN **99105-77-8** CAPLUS
 CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



RN **104206-82-8** CAPLUS
 CN 1,3-Cyclohexanedione, 2-[4-(methylsulfonyl)-2-nitrobenzoyl]- (9CI) (CA INDEX NAME)



L19 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:94030 CAPLUS

DOCUMENT NUMBER: 126:100267

TITLE: **Plant** and bacterial hydroxyphenylpyruvate dioxxygenase genes and production of transgenic **plants** tolerant to dioxxygenase-inhibiting herbicides

INVENTOR(S): Sailland, Alain; Rolland, Anne; Matringe, Michel; Pallett, Ken

PATENT ASSIGNEE(S): Rhone-Poulenc Agrochimie, Fr.; Sailland, Alain; Rolland, Anne; Matringe, Michel; Pallett, Ken

SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: **Patent**

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------------|--|----------|-----------------|--------------|
| WO 9638567 | A2 | 19961205 | WO 1996-FR831 | 19960603 <-- |
| WO 9638567 | A3 | 19970522 | | |
| W: | AL, AU, BB, BG, BR, CA, CN, CZ, EE, GE, HU, IL, IS, JP, KP, KR, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | |
| FR 2734840 | A1 | 19961206 | FR 1995-6800 | 19950602 <-- |
| FR 2734840 | B1 | 19970801 | | |
| FR 2734841 | A1 | 19961206 | FR 1995-13570 | 19951110 <-- |
| FR 2734841 | B1 | 19980313 | | |
| FR 2734842 | A1 | 19961206 | FR 1996-5944 | 19960507 <-- |
| FR 2734842 | B1 | 19980227 | | |
| CA 2219979 | AA | 19961205 | CA 1996-2219979 | 19960603 <-- |
| AU 9662286 | A1 | 19961218 | AU 1996-62286 | 19960603 <-- |
| AU 718982 | B2 | 20000504 | | |
| EP 828837 | A2 | 19980318 | EP 1996-920888 | 19960603 <-- |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, FI | | | |
| CN 1192243 | A | 19980902 | CN 1996-195857 | 19960603 <-- |
| BR 9608375 | A | 19990105 | BR 1996-8375 | 19960603 <-- |
| JP 11505729 | T2 | 19990525 | JP 1996-536268 | 19960603 <-- |
| NZ 311055 | A | 20000228 | NZ 1996-311055 | 19960603 |
| US 6268549 | B1 | 20010731 | US 1998-945515 | 19980218 <-- |
| AU 760662 | B2 | 20030522 | AU 2000-48989 | 20000802 |

PRIORITY APPLN. INFO.:

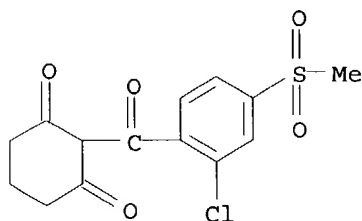
| | | |
|---------------|---|----------|
| FR 1995-6800 | A | 19950602 |
| FR 1995-13570 | A | 19951110 |
| FR 1996-5944 | A | 19960517 |

AU 1996-62286 A3 19960603
WO 1996-FR831 W 19960603

AB DNA sequences of a bacterial gene and 2 **plant** cDNAs for hydroxy-Ph pyruvate dioxygenase (HPPD) and production of **plants** containing a gene/cDNA for HPPD which are resistant to herbicides are claimed. The *Pseudomonas fluorescens* HPPD gene was cloned. Transgenic tobacco expressing a chimeric HPPD gene comprising a double histone promoter, a tobacco etch virus enhancer, a chloroplast transit peptide-encoding sequence, the bacterial HPPD gene, and the nopaline synthase gene terminator were produced. These transgenic **plants** were resistant to 400 g/ha 4-[4-trifluoromethyl-2-(methylsulfonyl)benzoyl]-5-cyclopropyl isoxazole. The HPPD gene was also successfully used as a **plant** marker gene with isoxaflutole as a selective agent.

IT 99105-77-8, Sulcotrione
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(resistance to; **plant** and bacterial hydroxyphenylpyruvate dioxygenase genes and production of transgenic **plants** tolerant to dioxygenase-inhibiting herbicides)

RN 99105-77-8 CAPLUS
CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



L19 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:705767 CAPLUS
DOCUMENT NUMBER: 125:320561
TITLE: Synergistic herbicidal compositions of metolachlor
INVENTOR(S): Hudetz, Manfred; Kidder, Dan Worden; Milliken, Robert Franklin; Nelgen, Norbert
PATENT ASSIGNEE(S): CIBA Ltd., Switz.
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: **Patent**
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|--|----------|-----------------|--------------|
| WO 9632013 | A1 | 19961017 | WO 1996-EP1431 | 19960401 <-- |
| W: | AL, AU, BB, BG, BR, CA, CN, CZ, EE, GE, HU, IS, JP, KP, KR, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | |
| CA 2213498 | AA | 19961017 | CA 1996-2213498 | 19960401 <-- |
| AU 9652763 | A1 | 19961030 | AU 1996-52763 | 19960401 <-- |
| AU 697026 | B2 | 19980924 | | |

| | | | | |
|---|----|----------|----------------|--------------|
| EP 820227 | A1 | 19980128 | EP 1996-909161 | 19960401 <-- |
| EP 820227 | B1 | 20030102 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI | | | | |
| CN 1180993 | A | 19980506 | CN 1996-193193 | 19960401 <-- |
| BR 9604943 | A | 19980609 | BR 1996-4943 | 19960401 <-- |
| JP 11503438 | T2 | 19990326 | JP 1996-530685 | 19960401 <-- |
| JP 3416702 | B2 | 20030616 | | |
| AT 230211 | E | 20030115 | AT 1996-909161 | 19960401 |
| CZ 291750 | B6 | 20030514 | CZ 1997-3230 | 19960401 |
| ES 2189867 | T3 | 20030716 | ES 1996-909161 | 19960401 |
| ZA 9602877 | A | 19961014 | ZA 1996-2877 | 19960411 <-- |
| IL 117872 | A1 | 20010430 | IL 1996-117872 | 19960411 |
| US 5981432 | A | 19991109 | US 1998-930901 | 19980202 <-- |
| AU 9898218 | A1 | 19990304 | AU 1998-98218 | 19981224 <-- |
| AU 723452 | B2 | 20000824 | | |
| CN 1311990 | A | 20010912 | CN 2001-101289 | 20010117 |
| CN 1326677 | A | 20011219 | CN 2001-121937 | 20010622 |
| CN 1327727 | A | 20011226 | CN 2001-121938 | 20010622 |
| CN 1327728 | A | 20011226 | CN 2001-121939 | 20010622 |
| CN 1327729 | A | 20011226 | CN 2001-121940 | 20010622 |
| CN 1327730 | A | 20011226 | CN 2001-121941 | 20010622 |

PRIORITY APPLN. INFO.:

| | | |
|----------------|----|----------|
| CH 1995-1072 | A | 19950412 |
| AU 1996-52763 | A3 | 19960401 |
| WO 1996-EP1431 | W | 19960401 |

OTHER SOURCE(S):

MARPAT 125:320561

AB Herbicidal compns. comprise the most active optical isomer of metolachlor and a synergistic other known herbicide, i.e. a sulfonylurea, sulfonanilide, triazines, triazinones, pyridazinone, organophosphate, aryloxylakanoic acid, aryloxyphenoxypyranoic acid, pyridinecarboxylic acid, benzoic acid, di-Ph ether, imidazolinone, dinitroaniline, benzonitrile, chloroacetanilide, benzothiadiazinone, thio- or biscarbamate, urea, cyclohexanedione oxime and/or bipyridylum derivative

IT 134501-77-2

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(synergistic herbicide)

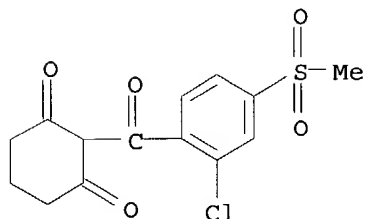
RN 134501-77-2 CAPLUS

CN Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-, mixt. with 2-[2-chloro-4-(methylsulfonyl)benzoyl]-1,3-cyclohexanedione (9CI) (CA INDEX NAME)

CM 1

CRN 99105-77-8

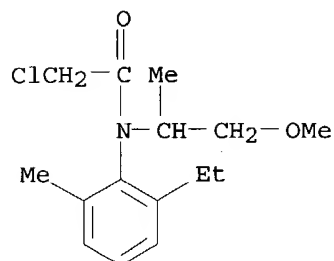
CMF C14 H13 Cl O5 S



CM 2

CRN 51218-45-2

CMF C15 H22 Cl N O2



L19 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:354263 CAPLUS

DOCUMENT NUMBER: 122:127570

TITLE: Partial purification of p-hydroxyphenylpyruvate dioxxygenase from **plants** and use of the crude enzyme for identification of inhibitors

INVENTOR(S): Schulz, Arno

PATENT ASSIGNEE(S): Hoechst A.-G., Germany

SOURCE: Ger. Offen., 6 pp.

CODEN: GWXXBX

DOCUMENT TYPE: **Patent**

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------|------|----------|-----------------|--------------|
| DE 4305696 | A1 | 19940901 | DE 1993-4305696 | 19930225 <-- |
| EP 614970 | A2 | 19940914 | EP 1994-102631 | 19940222 <-- |
| EP 614970 | A3 | 19960612 | | |
| R: CH, DE, FR, GB, IT, LI | | | | |
| CA 2116421 | AA | 19940826 | CA 1994-2116421 | 19940224 <-- |
| JP 06343464 | A2 | 19941220 | JP 1994-27000 | 19940224 <-- |
| US 5843869 | A | 19981201 | US 1995-369875 | 19950106 <-- |
| US 5786513 | A | 19980728 | US 1995-462621 | 19950605 <-- |
| US 6555714 | B1 | 20030429 | US 1998-16600 | 19980130 <-- |

PRIORITY APPLN. INFO.:

| | | |
|-----------------|----|----------|
| DE 1993-4305696 | A | 19930225 |
| US 1994-200741 | B1 | 19940223 |
| US 1995-369875 | A3 | 19950106 |
| US 1995-462621 | A3 | 19950605 |

AB A method for partially purifying p-hydroxyphenylpyruvate dioxxygenase from **plants** and a test system using this partially purified enzyme for identification of inhibitors of the enzyme. Maize was homogenized in buffer containing buffer, glutathione, and insol. polyvinylpyrrolidone. The homogenate was centrifuged at 10,000 x g and the supernatant was subjected to (NH₄)₂SO₄ precipitation. The protein precipitating at 20-40% saturation was taken up in buffer and used for identification of inhibitors. Inhibition of ¹⁴C release from ¹⁴C-p-hydroxyphenylpyruvate was measured. The herbicide SC-0051 was found to be an inhibitor of maize p-hydroxyphenylpyruvate dioxxygenase. Homogentisic acid antagonized this inhibition.

IT 99105-77-8, SC-0051

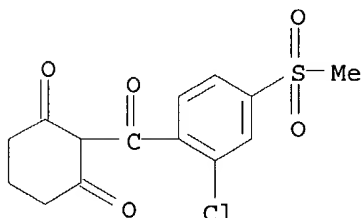
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

09743876

(inhibitor; partial purification of p-hydroxyphenylpyruvate dioxygenase from plants and use of the crude enzyme for identification of inhibitors)

RN 99105-77-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(methylsulfonyl)benzoyl]- (9CI) (CA INDEX NAME)



L19 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:633600 CAPLUS

DOCUMENT NUMBER: 117:233600

TITLE: Haloalkoxy-substituted benzoylcyclohexanediones as herbicides and plant growth regulators

INVENTOR(S): Stark, Herbert; Bauer, Klaus; Bieringer, Hermann

PATENT ASSIGNEE(S): Hoechst A.-G., Germany

SOURCE: Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

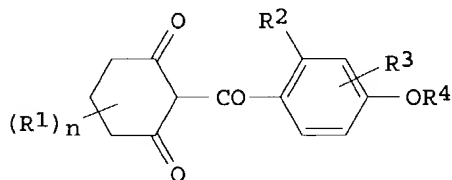
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| EP 502492 | A2 | 19920909 | EP 1992-103664 | 19920304 <-- |
| EP 502492 | A3 | 19921125 | | |
| R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL | | | | |
| US 5306695 | A | 19940426 | US 1992-846003 | 19920304 <-- |
| CA 2062440 | AA | 19920907 | CA 1992-2062440 | 19920305 <-- |
| AU 9211450 | A1 | 19920910 | AU 1992-11450 | 19920305 <-- |
| ZA 9201642 | A | 19921028 | ZA 1992-1642 | 19920305 <-- |
| JP 04338356 | A2 | 19921125 | JP 1992-48911 | 19920305 <-- |
| BR 9200766 | A | 19921110 | BR 1992-766 | 19920306 <-- |
| HU 61434 | A2 | 19930128 | HU 1992-770 | 19920306 <-- |
| PRIORITY APPLN. INFO.: | | | DE 1991-4107141 | 19910306 |

GI



I

AB Title compds. [I; n = 0-6; R1 = C1-4 (halo)alkyl, (3-6 (halo)alkyl,

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(halo)phenyl; R2 = halo, NO2, cyano, C1-3 alkyl, C1-3 haloalkyl, C1-3 (halo)alkoxy, C1-3 alkylthio, RSO2, RSO2O, RSO2NR5; R, R5 = Me, Et, C1-2 haloalkyl; R3 = H, halo, C1-3(halo)alkyl, C1-3(halo)alkyl, C1-3 alkylthio; R4 = C1-3 haloalkyl] were prepared as herbicides and **plant** growth regulators. Thus, 2-chloro-4-difluoromethoxybenzoyl chloride and 1,3-cyclohexanedione were stirred for 15 min in MeCN at room temperature, acetone cyanohydrin was added, and the mixture was stirred 3 h at room temperature to give

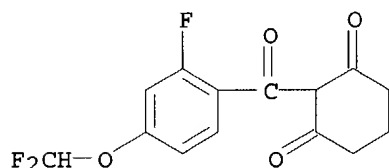
2-(2-chloro-4-difluoromethoxybenzoyl)cyclohexan-1,3-dione [II] in 87% yield. II at 1.25 kg/ha pre- and post-emergent gave 80-100% control of *Stellaria media*.

IT 144510-38-3P 144510-39-4P 144510-40-7P
 144510-41-8P 144510-42-9P 144510-43-0P
 144510-44-1P 144510-45-2P 144510-46-3P
 144510-47-4P 144510-48-5P 144510-49-6P
 144510-50-9P 144510-51-0P 144510-52-1P
 144510-53-2P 144510-54-3P 144510-55-4P
 144510-56-5P 144510-57-6P 144510-58-7P
 144510-59-8P 144510-60-1P 144510-61-2P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as herbicide and **plant** growth regulator)

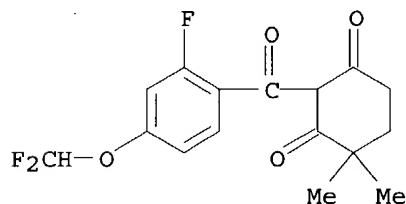
RN 144510-38-3 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-fluorobenzoyl]- (9CI) (CA INDEX NAME)



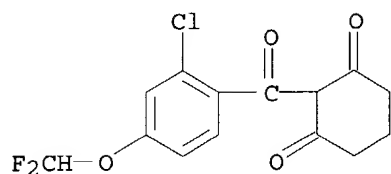
RN 144510-39-4 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-fluorobenzoyl]-4,4-dimethyl- (9CI) (CA INDEX NAME)

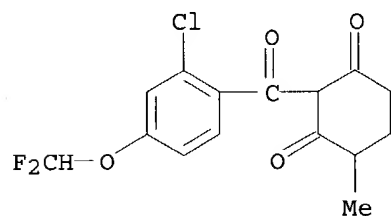


RN 144510-40-7 CAPLUS

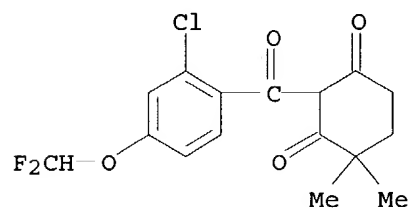
CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]- (9CI) (CA INDEX NAME)



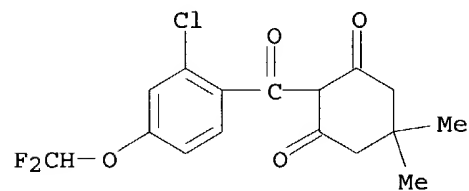
RN 144510-41-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]-4-methyl-
(9CI) (CA INDEX NAME)

RN 144510-42-9 CAPLUS

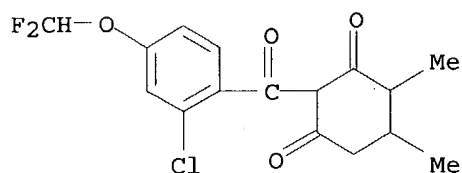
CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]-4,4-dimethyl-
(9CI) (CA INDEX NAME)

RN 144510-43-0 CAPLUS

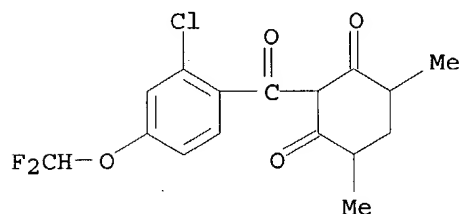
CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]-5,5-dimethyl-
(9CI) (CA INDEX NAME)

RN 144510-44-1 CAPLUS

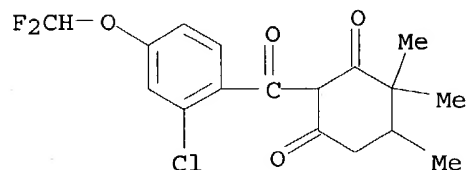
CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]-4,5-dimethyl-
(9CI) (CA INDEX NAME)



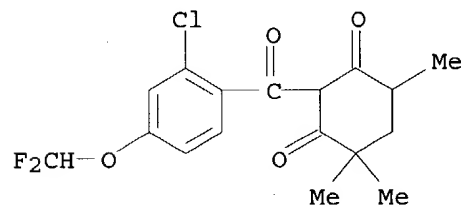
RN 144510-45-2 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]-4,6-dimethyl-
(9CI) (CA INDEX NAME)

RN 144510-46-3 CAPLUS

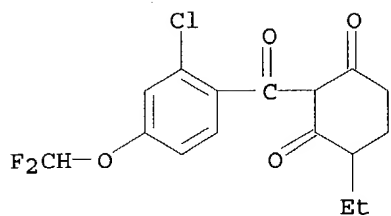
CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]-4,4,5-
trimethyl- (9CI) (CA INDEX NAME)

RN 144510-47-4 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]-4,4,6-
trimethyl- (9CI) (CA INDEX NAME)

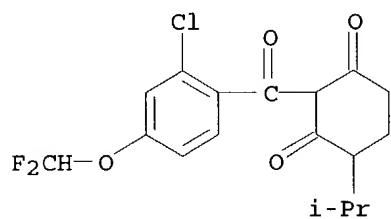
RN 144510-48-5 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]-4-ethyl-
(9CI) (CA INDEX NAME)



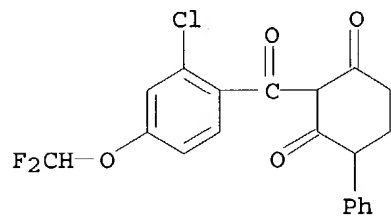
RN 144510-49-6 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]-4-(1-methylethyl)- (9CI) (CA INDEX NAME)



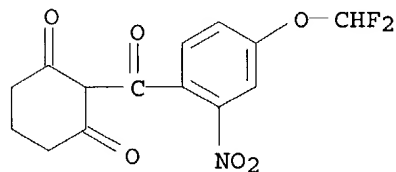
RN 144510-50-9 CAPLUS

CN 1,3-Cyclohexanedione, 2-[2-chloro-4-(difluoromethoxy)benzoyl]-4-phenyl- (9CI) (CA INDEX NAME)



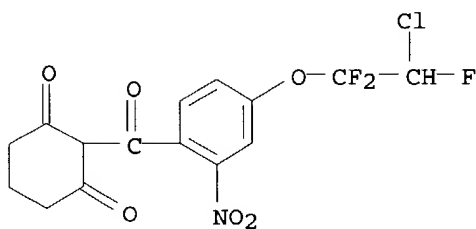
RN 144510-51-0 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-nitrobenzoyl]- (9CI) (CA INDEX NAME)

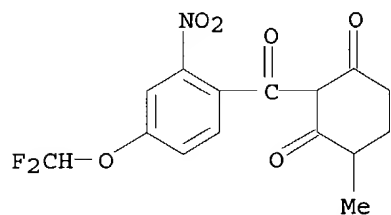


RN 144510-52-1 CAPLUS

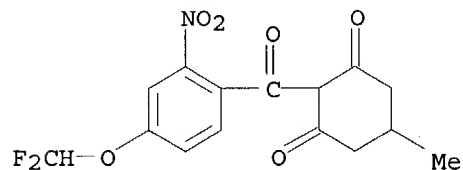
CN 1,3-Cyclohexanedione, 2-[4-(2-chloro-1,1,2-trifluoroethoxy)-2-nitrobenzoyl]- (9CI) (CA INDEX NAME)



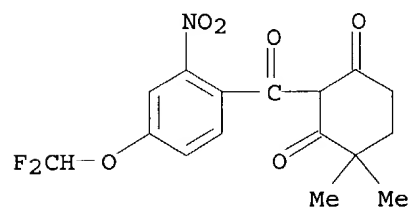
RN 144510-53-2 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-nitrobenzoyl]-4-methyl-
(9CI) (CA INDEX NAME)

RN 144510-54-3 CAPLUS

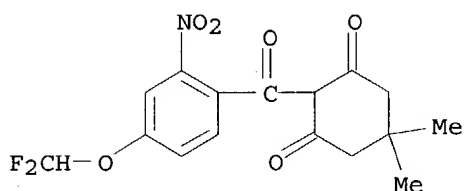
CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-nitrobenzoyl]-5-methyl-
(9CI) (CA INDEX NAME)

RN 144510-55-4 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-nitrobenzoyl]-4,4-dimethyl-
(9CI) (CA INDEX NAME)

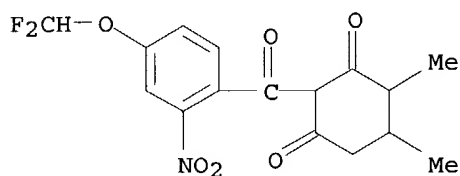
RN 144510-56-5 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-nitrobenzoyl]-5,5-dimethyl-
(9CI) (CA INDEX NAME)



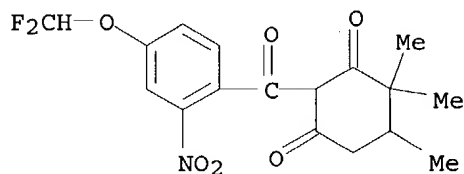
RN 144510-57-6 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-nitrobenzoyl]-4,5-dimethyl- (9CI) (CA INDEX NAME)



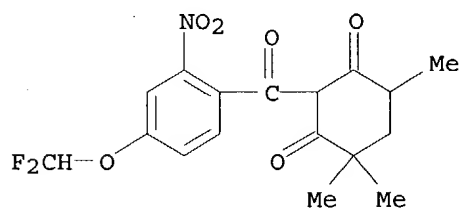
RN 144510-58-7 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-nitrobenzoyl]-4,4,5-trimethyl- (9CI) (CA INDEX NAME)



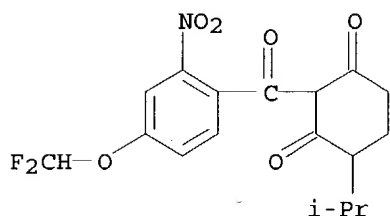
RN 144510-59-8 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-nitrobenzoyl]-4,4,6-trimethyl- (9CI) (CA INDEX NAME)

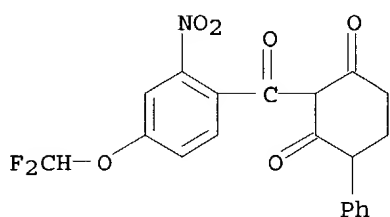


RN 144510-60-1 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-nitrobenzoyl]-4-(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 144510-61-2 CAPLUS

CN 1,3-Cyclohexanedione, 2-[4-(difluoromethoxy)-2-nitrobenzoyl]-4-phenyl-
(9CI) (CA INDEX NAME)

L19 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:477757 CAPLUS

DOCUMENT NUMBER: 113:77757

TITLE: Acylcyclohexanediones and the oxime ethers thereof
with herbicidal and **plant** growth regulating
properties and their preparation

INVENTOR(S): Tobler, Hans

PATENT ASSIGNEE(S): Ciba-Geigy Corp., USA

SOURCE: U.S., 19 pp. Cont.-in-part of U.S. Ser. No. 39,039,
abandoned.

CODEN: USXXAM

DOCUMENT TYPE: **Patent**

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|--------------|
| US 4909835 | A | 19900320 | US 1988-159803 | 19880224 <-- |
| US 5026899 | A | 19910625 | US 1989-450128 | 19891213 <-- |
| US 5132462 | A | 19920721 | US 1991-666178 | 19910307 <-- |
| US 5169988 | A | 19921208 | US 1992-865389 | 19920408 <-- |
| PRIORITY APPLN. INFO.: | | | CH 1986-1664 | 19860424 |
| | | | US 1987-39039 | 19870416 |
| | | | US 1988-159803 | 19880224 |
| | | | US 1989-450128 | 19891213 |
| | | | US 1991-666178 | 19910307 |

OTHER SOURCE(S): MARPAT 113:77757

GI For diagram(s), see printed CA Issue.

AB The title compds. I [A = 2- to 7-membered alkylene bridge, or 3- to
7-membered alkenylene bridge which may be mono- or polyunsatd.; R1 = C1-4
alkyl, PhCH2; R2 = (substituted) C1-6 alkyl, C3-6 cycloalkyl,
(substituted) Ph, PhCH2, etc.; X = O, NOR3; R3 = C1-6 alkyl, haloalkyl,

C3-6 alkenyl, haloalkenyl, alkynyl] were prepared. A mixture of cyclohexenone II and 4-(N,N-dimethylamino)pyridine was stirred for 3 days at 100-110° to give cyclohexanedione III. Cyclohexanedione IV (A = CH₂CH₂) at 60 g/ha postemergence gave complete control of *Echinochloa crus galli*.

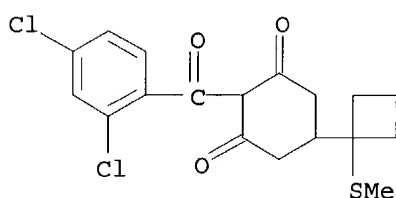
IT 113073-69-1P 113073-72-6P 113074-28-5P

113074-32-1P 113100-08-6P 113100-09-7P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as herbicide and **plant** growth regulator)

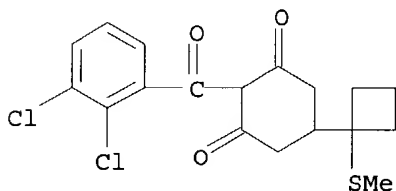
RN 113073-69-1 CAPLUS

CN 1,3-Cyclohexanedione, 2-(2,4-dichlorobenzoyl)-5-[1-(methylthio)cyclobutyl]-(9CI) (CA INDEX NAME)



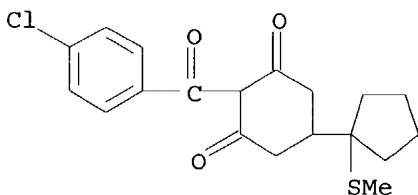
RN 113073-72-6 CAPLUS

CN 1,3-Cyclohexanedione, 2-(2,3-dichlorobenzoyl)-5-[1-(methylthio)cyclobutyl]-(9CI) (CA INDEX NAME)



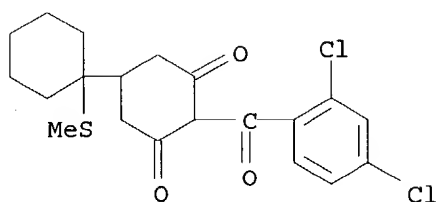
RN 113074-28-5 CAPLUS

CN 1,3-Cyclohexanedione, 2-(4-chlorobenzoyl)-5-[1-(methylthio)cyclopentyl]-(9CI) (CA INDEX NAME)



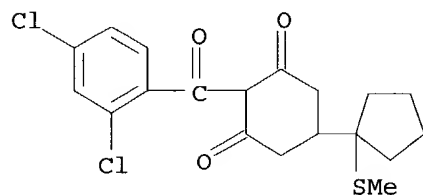
RN 113074-32-1 CAPLUS

CN [1,1'-Bicyclohexyl]-3,5-dione, 4-(2,4-dichlorobenzoyl)-1'-(methylthio)-(9CI) (CA INDEX NAME)



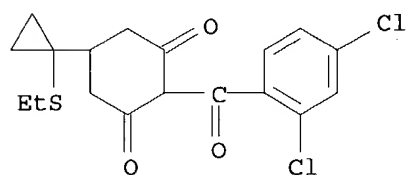
RN 113100-08-6 CAPLUS

CN 1,3-Cyclohexanedione, 2-(2,4-dichlorobenzoyl)-5-[1-(methylthio)cyclopentyl]- (9CI) (CA INDEX NAME)



RN 113100-09-7 CAPLUS

CN 1,3-Cyclohexanedione, 2-(2,4-dichlorobenzoyl)-5-[1-(ethylthio)cyclopropyl]- (9CI) (CA INDEX NAME)



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COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

69.23

565.54

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-8.32

-11.79

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